THE REPORT

OF THE

PRESIDENT

OF

QUEEN'S COLLEGE, CORK,

FOR

THE YEAR ENDING 31st MARCH, 1872;

WITH APPENDICES A TO K INCLUSIVE.

Presented to both Houses of Parliament by Command of Her Majesty.

CONTENTS.

THE REPORT

OF THE

PRESIDENT OF QUEEN'S COLLEGE, CORK,

FOR

THE YEAR ENDING 31st MARCH, 1872.

TO THE QUEEN'S MOST GRACIOUS MAJESTY.

MAY IT PLEASE YOUR MAJESTY—

In compliance with the provisions of the Colleges Act of Parliament and of the Charter of the Queen's Colleges, I have the honour to submit the following Report of the Progress and Condition of this College for the year ending 31st March, 1872.

1. EXAMINATIONS FOR ENTRANCE, NUMBERS AND CLASSIFICATION OF STUDENTS.

The Entrance Examinations for the Session now current, were held in October, 1871, on the several days appointed by the College Council. The regulations on the subject are given in the Prospectus of the Session, of which a copy is annexed, forming Appendix A.

After these Examinations 77 new Students were entered as Matriculated Students of the First-year's Class. Further, 13 Students who had previously Matriculated, but who, from not having been promoted, or from other causes, had resumed the studies of the first year, being added to the above, makes the total number of Students in that Class in the Current Session 90.

In addition to the above there presented themselves to proceed with the studies of the Senior years 140 Students, who had passed the Sessional Examinations at the close of the previous Academic Year. The total number of Matriculated Students attending the College during the Current Session is, therefore, 230.

Besides the above 230 Matriculated Students, there entered to attend the Lectures of particular Professors 23 Non-Matriculated Students, making the total number of Students in attendance at the College during the Current Session to be 253.

Those Students were classified according to their Collegiate standing in the following Table, which also shows, for sake of comparison, the similar returns for the preceding Session.

	Session, 1870-71.	Session, 1871-72.
Matriculated Students, Course of First Year,	89	90
Course of Second Year,	57	47
Course of Third Year,	39	52
Course of Fourth Year,	35	27
Special courses,	5	14
Total number of Matriculated Students,	225	230
Non-Matriculated Students,	25	23
Total number of Students,	250	253

In regard to Faculties and courses of study for Diplomas and Degrees, the classification of the Students who attended the College during the Session of 1871–72 was as follows :—

	Matriculated.	Non-matriculated.	Total.
In the Faculty of Arts,	53	–	53
In the Faculty of Medicine,	154	19	173
In the Faculty of Law,	11	–	12
In the Faculty of Engineering,	25	–	25
Total,	243	20	263

Of the above Matriculated Students, 13 attended in more than one Faculty, viz.:—In Arts and Medicine 11, in Arts and Law 2; and of the Non-matriculated Students, 3 attended Special Courses. The excess of 10 in the last over the numbers in the former table is so explained.

The ages of the new Students who entered for the Session 1871–72 were as follow :—

13 Years,	2	19 Years,	11
14 Years,	4	20 Years,	3
15 Years,	3	21 Years and Upwards,	13
16 Years,	14	Unknown,	1
17 Years,	14		
18 Years,	10	Total,	77

Of the entire number of Students on the roll for the Session 1871-72, there are 66 aged 21 years and upwards, and 164 under 21 years of age.

2. COLLEGE EXAMINATIONS FOR SESSIONAL PROMOTION OF STUDENTS FROM THE SESSION OF 1870-71, AND FOR SCHOLARSHIPS IN THE SESSION 1871-72.

The Examinations for Sessional promotion were held at the end of the Session of 1870-71, with the results shown in the following table :—

Faculty.	Promoted.	Not promoted.	Total.
Arts,	23	27	50
Law,	5	4	9
Engineering,	14	16	30
Total,	42	47	89
Medical Students not requiring promotion,	–	–	145
			234
Attending more than one Faculty,	–	–	9
Total Number of Matriculated Students on Roll in Session 1870-71, as shown in last Report,	–	–	225

Those examinations were conducted by means of printed papers, of which a selection is given in Appendix B, and prizes were awarded to those Students who were specially recommended to the College Council by the examining Professors. The names of the Students who received Sessional honors and prizes are given in Appendix C.

The Examinations for Scholarships were held in the commencement of the Session of 1871–72 as usual under the direction of the College Council, with the following results:—

The 7 Senior Scholarships in Arts, 5 were awarded.
The Senior Scholarship in Law was awarded.
Of the 30 Junior Scholarships in Arts, 21 were awarded.
Of the 8 Scholarships in Medicine, 6 were awarded.
Of the 5 Scholarships in Engineering, 4 were awarded.
Of the 3 Junior Scholarships in Law, 2 were awarded.

The Examinations for those Scholarships were conducted principally by means of printed papers. The subjects of examination are described in Prospectus (Appendix A), and the more important papers of questions are given in Appendix D.

3. COURSES OF INSTRUCTION.

The particulars of the Classes, the number of Lectures delivered by each Professor, and the number of Students attending each Class in the Session 1871–72, are given in the Table (Appendix E); and further details as to the special departments will be found in the Reports of the Professors annexed, forming the Appendix F.

4. QUEEN'S UNIVERSITY EXAMINATIONS AND PEEL EXHIBITIONS.

The Students who had completed their collegiate courses were recommended to the Senate of the Queen's University to be examined for their respective Degrees and Diplomas. The names of those Students of Queen's College, Cork, who obtained Degrees at the University Examinations in June and October, 1871, and also of those who obtained honors on those occasions are given in Appendix G.

At the University Examination in October, 1871, 7 students passed the First Examination in Arts, of whom 2 obtained first-class, 2 second-class, and 1 third-class honors, and 2 were unclassed. On the same occasion, 3 Students passed the First Examination in Engineering, of whom 2 obtained third-class honors, and 1 was unclassed. The First University Examination in Medicine was passed by 30 Students, of whom one obtained second-class honors, and 29 were unclassed.

The First Prize in Composition open to Graduates and Undergraduates, was conferred on Mr. Daniel Wilson, for the Essay signed, "Giordano Bruno."

The Geometrical Prizes at Entrance were conferred on:—

First, William Stoops.
Second, James Bingham.

The Prizes in English Composition at Entrance were conferred on:—

First, William O'Brien.
Second, Denis F. Hanagan.

At the First University Examination in Arts, a Peel Exhibition of £20 a-year, for three years, was conferred on Mr. James J. Hynes, as was also an Exhibition of £10 a-year, for three years, as best answerer in Ancient Classics.

A Peel Exhibition of £15 per year, for three years, was conferred on Mr. James J. O'Donoghue, as second best answerer in Ancient Classics.

5. COMPETITIVE EXAMINATIONS AND CIVIL SERVICE APPOINTMENTS.

At Competitive Examinations held in the year 1871–72, the following Students of Queen's College, Cork, obtained appointments:—

William Dunbar Blyth, B.A., Indian Civil Service.
James Magill, B.A., Army Medical Home Service.
John W. Davis, Indian Medical Service, Sixth Place.
Christopher Lloyd,   do.   do.
Joseph Wilson,   do.   do.
Arthur Hill, B.A., the Silver Medal Prize, and Life Studentship, given by the Royal Academy, London, for best drawings from actual measurement from an existing building.

6. LIBRARY AND MUSEUMS.

The special Report of the Librarian will be found in Appendix H; and reference may be made for explanations as to the condition and progress of the several Museum Departments to the Reports of the Professors (Appendix F), in whose charge those special branches of instruction have been placed.

I beg leave to represent the necessity already so strongly urged, that a Conservatory or Hot-house should be provided for Tropical and Subtropical Plants, to supply Typical Illustrations for the use of the Professor of Natural History. The urgent want of such has been pressingly urged in former Reports, and I again solicit attention to the subject, as materially affecting the completeness of instruction in that important branch of Science.

7. FINANCIAL POSITION OF THE COLLEGE.

I have the honour to annex copies of the Abstract of the College Account as annually furnished to the Audit Office by the Bursar of the College, and also a statement of the distribution of the Parliamentary Grant for the year closing 31st March, 1872, forming Appendix I.

I beg to state that Mr. Fitzgerald, the former Bursar of the College, having been dismissed, John England, M.A., Professor of Natural Philosophy, was appointed to the office of Bursar in his stead.

8. CONDUCT AND DISCIPLINE OF THE STUDENTS.—PROPORTION OF THE SEVERAL RELIGIOUS DENOMINATIONS.

I have to report that the conduct of the Students of Queen's College, Cork, during the year 1871, has been in every respect satisfactory, no breach of discipline requiring the notice of the

College Council having occurred within that time. In March, 1872, a breach of discipline was committed by some Students who held a meeting in contravention of the regulations of the College Council, for which three of them were summoned before the Council, and were reprimanded and fined.

In reference to the moral and religious conduct of the Students under 21 years of age, resident in licensed boarding-houses, I have the honour to submit the Reports of the Deans of Residences, forming Nos. 1, 2, and 3 of Appendix K.

With regard to the proportions of the several religious denominations of the Students, the following Table gives the numbers for the last and for the current Session:—

RELIGIOUS DENOMINATIONS.	1870–71.			1871–72.		
	Matriculated.	Non-Matriculated.	Total.	Matriculated.	Non-Matriculated.	Total.
Roman Catholic, . . .	79	7	86	98	6	104
Anglican, ...	125	17	142	118	13	131
Presbyterian, . . .	13	—	13	10	—	10
Other Denominations, . .	9	1	10	6	2	8
Total, . .	226	24	250	239	23	253

The following Table gives the religious denominations of the new Students recently admitted for the Session now current, and for the previous Session:—

RELIGIOUS DENOMINATIONS.	1870–71.			1871–72.		
	Matriculated.	Non-Matriculated.	Total.	Matriculated.	Non-Matriculated.	Total.
Roman Catholic, . . .	23	2	25	35	4	39
Anglican, ...	37	10	47	37	8	45
Presbyterian, . . .	3	—	3	4	—	4
Other Denominations, . .	1	1	2	1	1	2
Total, . .	64	13	77	77	13	90

The proportion of Roman Catholics who entered the College in last October, is thus found to be considerably in excess of that of the new entrances of the preceding year—viz., 35 to 23, whilst the proportion of the aggregate Protestant denominations remains unaltered, 42 to 41—the increase in the numbers of the new Students, 64 to 77, being Roman Catholic, 12 out of 13. A similar proportionate excess is found in the Roman Catholics of the Senior Classes, as the total number of Roman Catholic Matriculated Students attending the College in the Current Session is 98, as against 79 in the previous—the total number of Students, (253) being practically the same.

Finally, it is my duty to record the loss which the College has sustained during the past year by the deaths of two Professors

who, in their respective departments, had rendered zealous and efficient service to the cause of Literary and Scientific progress.

William Rushton, A.M., had held the Professorship of English Literature and History since the year 1858, and always discharged the duties of his office to the great advantage of the Students, and to the full satisfaction of the College authorities. He had published text-books on English Grammar and Philology, which are highly valued by competent judges, and had specially devoted himself to the study of Early English and Anglo-Saxon, for which his accurate Scholarship and his extensive Philological knowledge eminently qualified him. He has been succeeded in that Professorship by George Armstrong, A.M.

John Blyth, M.D., had been appointed to the Professorship of Chemistry, in 1849, and had, since that time, not merely discharged the duties of that important office in the most zealous and efficient manner, but had also rendered valuable assistance in the administration of the College as a Member of Council. He also delivered the Medico-Chemical portion of the course of lectures on Medical Jurisprudence, and from his knowledge of that subject was, on many occasions, enabled to render important services to the administration of justice. The unexpected and premature death of Dr. Blyth has been felt by all his colleagues as a serious loss to the institution, which his personal qualities and his Scientific talents had so much contributed to support. He has been succeeded in the Professorship of Chemistry, by Dr. Maxwell Simpson, M.D., F.R.S.

ROBERT KANE, LL.D., F.R.S.
President of Queen's College, Cork.

QUEEN'S COLLEGE, CORK,
April 10, 1872.

APPENDIX.

APPENDIX A.

GENERAL REGULATIONS of the COLLEGE.—LIST OF OFFICERS.—PRO-GRAMME of COURSES for MATRICULATION and SCHOLARSHIP.—Hours of LECTURE.—SPECIAL COURSES for COMPETITIVE EXA-MINATIONS and for the PUBLIC SERVICE.—UNIVERSITY EXAMI-NATIONS.

QUEEN'S UNIVERSITY IN IRELAND—QUEEN'S COLLEGE, CORK.

Session 1871-72.

President—SIR ROBERT KANE, LL.D., F.R.S., M.R.I.A.

Vice-President—JOHN RYALL, LL.D.

Professors.

The Greek Language,	JOHN RYALL, LL.D.
The Latin Language,	BUNNELL LEWIS, M.A., F.S.A.
Mathematics,	CHARLES NIVEN, M.A., FELLOW OF TRIN. COLL., CAMB.
Natural Philosophy,	JOHN ENGLAND, M.A.
History and English Literature,	GEORGE ARMSTRONG, M.A.
Logic and Metaphysics,	GEORGE SIDNEY READ, M.A.
Chemistry,	JOHN BLYTH, M.D.
Natural History,	JOSEPH REAY GREENE, B.A., M.D., M.R.I.A.
Geology and Mineralogy,	ROBERT HARKNESS, F.R.S.L. & E., F.G.S.
Modern Languages,	RAYMOND DE VERICOUR, M.A.
Jurisprudence & Political Economy,	RICHARD HORNER MILLS, M.A.
English Law,	MARK S. O'SHAUGHNESSY, M.R.I.A.,
Anatomy and Physiology,	J. HENRY CORBETT, M.D., L.R.C.S.I.
Medicine,	DENIS C. O'CONNOR, B.A., M.D.
Surgery,	WM. K. TANNER, M.D., F. & L.R.C.S.I.
Materia Medica,	FURCELL O'LEARY, B.& L.L., M.A., M.D., F.R.S.
Midwifery,	JOSHUA R. HARVEY, B.A., M.D.
Medical Jurisprudence,	
Engineering,	ALEXANDER JACK, M.A.
Celtic Languages,	OWEN CONNELLAN, Esq.

Officers.

Registrar,	ROBERT JOHN KENNY, Esq.
Bursar,	MATTHIAS O'KEEFFE, M.A., M.D.
Librarian,	MATTHIAS O'KEEFFE, M.A., M.D

Deans of Residences.

Church of England,	Rev. GEORGE WEBSTER, D.D.
Presbyterian Church,	Rev. WILLIAM MAGILL.
Wesleyan Communion,	Rev. EDWARD BEST.
Non-Subscribing Presbyterian,	Rev. W. WHITELEGGE, M.A.

NOTE.—The Registrar's Office is open to Students on Tuesdays and Fridays, from 11 A.M. to 2 P.M. The Bursar's Office is open.

Appendix A.

General Regulations of College, &c.

THE COLLEGE SESSION, 1871-72.

The *First Term* will commence on the 17th of October, 1871, and end on the 23rd of December.

The *Second Term* will commence on the 8th of January, 1872, and end on the 22nd March.

The *Third Term* will commence on the 8th of April, 1872, and end with the Session, on the 9th of June.

ON THE DEGREES GRANTED BY THE QUEEN'S UNIVERSITY AND THE MANNER OF OBTAINING THEM.

The Degrees granted by the Senate of the Queen's University are as follows:—

In the Faculty of Arts—the Degrees of B.A. and M.A. and the Diploma of Licentiate in Arts.

In the School of Engineering—the Degree of Bachelor in Engineering.

In the Faculty of Medicine—the Degrees of M.D. and M.Ch.

In the Faculty of Law—the Diploma in Elementary Law and the Degrees of LL.B. and LL.D.

In order to be entitled to become a Candidate for any of these, it is necessary to have entered one of the Queen's Colleges as a Matriculated Student, and to have completed the prescribed course of study.

REGULATIONS FOR MATRICULATION.

To become a Matriculated Student it is necessary to pass the General Matriculation Examination. (For Subjects of Examination, see pp. 12 and 13).

Candidates for Matriculation are requested to send their names to the Registrar, at least *three days* before the commencement of the Examination, stating at the same time the Faculty or Department which they propose to enter.

Before being admitted to Examination they are required to pay the *College Fees* for the year, amounting to Ten Shillings for each Faculty or Department. These will be returned to such as fail to pass the Examination.

No Student will receive a Certificate of Matriculation until he has paid the whole of the *Class Fees* for the Session.

STUDENTS FROM OTHER COLLEGES.

Students who have pursued part of their studies in one of the Queen's Colleges, or in any University capable of granting Degrees in the Faculties of Arts, Law, and Medicine, are permitted, on producing testimonials of their College standing and conduct, to take corresponding rank in this College, and to compete for Scholarships of the corresponding year ; provided that they shall not hold at the same time a Scholarship, or any other office of emolument, in any other University or College.

NON-MATRICULATED STUDENTS.

Those who desire to attend any of the Lectures in the College may do so, without matriculating, or passing any of the College Examinations, on paying the Fees for those Lectures, together with a College Fee of Five Shillings.

They are entitled to the use of the Library, on subscribing this College Regulations, and paying a further fee of Fifteen Shillings.

They are not eligible for Scholarships or Prizes, and do not enjoy any of the other privileges of Matriculated Students; but the Professors may recommend the Council to grant Certificates of Honour to the most distinguished.

RESIDENCES.

There is no accommodation for the residence of students within the College, but it is provided by the Statutes that every Matriculated Student, being under the age of Twenty-one Years, shall reside, during the College Terms, with his

parent or guardian, or with some relation or friend, to whose care he shall have *Appendix A.* been committed by his parent or guardian, or in one of the Boarding-houses licensed by the President of the College and arranged for the reception of General Regulations students, who are then placed under the moral care and spiritual charge of the of College, Dean of Residence of their respective creeds. &c.

The Terms for Board and Lodging are charged at the rate of from £30 to £40 a year.

LIBRARY AND MUSEUM.

The Library is open daily to Students between the hours of 9 A.M. and 4 P.M., except on Saturdays, when it is closed at 1 o'clock.

The Museum is open daily between the hours of 9 A.M. and 3 P.M., except on Saturdays, when it is closed at 12 o'clock.

SCHOLARSHIPS.

There are at the disposal of the Council Forty-six Junior and Eight Senior Scholarships.

The former are held by Students who have not yet taken the Degree of B.A. ; the latter by Students who have obtained that Degree.

Of the Junior Scholarships—

Thirty, of the value of £24 each, are appropriated to the	Faculty of Arts. (See p. 14.)
Five, " " £20 " " "	School of Engineering. (See p. 18.)
Eight, " " £25 " " "	Faculty of Medicine. (See p. 20.)
Three, " " £30 " " "	Faculty of Law. (See p. 23.)

Of the Senior Scholarships—

Seven, of the value of £40 each, are appropriated to the	Faculty of Arts. (See p. 14.)
One, " " £40 " " "	Faculty of Law. (See p. 23.)

All these Scholarships are tenable for only one year, with the exception of the Scholarships of the Second Year in Arts, which are tenable for two years, if the Scholar obtain Honors at the First University Examination in Arts.

Conditions of Candidature and Tenure.

1. Candidates for Scholarships are required to pay on or before the day previous to the date of Examination, the College and Class Fees for the year in the corresponding Faculty. They must also procure a certificate to that effect from the Bursar, and be prepared to show it on their admission to Examination.

2. Scholarships of any year are tenable by Students who have duly completed the previous part of their Course by attending the requisite Courses of Lectures, and passing the ordinary College and University Examinations.

   A Student, as a rule, cannot hold two Scholarships at once ; but if he be a Candidate for both the Junior Scholarships in Arts of the same year, and stand first on each list, he may hold both the Scholarships.

3. Half the ordinary Class Fees are returned to Scholars.

4. Scholars must complete their attendance during the Session, pass their Sessional Examinations, and observe such rules as the Council may from time to time enact.

5. In the Faculty of Medicine, Scholars must attend the Classes recommended for their year of study, in the order of the Curriculum.

6. Scholars and Exhibitioners have certain statutory duties ; such as taking charge of the Class-rolls, registering the attendance of the Students, assisting the Professors in the maintenance of discipline and good conduct in the Students, and for the general business of the College.

EXHIBITIONS AND PRIZES.

The Council are authorized to grant in certain cases Exhibitions to Candidates who may have failed to obtain Scholarships at the Scholarship Examination.

In May and June are held General Examinations in the subjects lectured upon during the Session; and Prizes of Books are awarded by the Council to the most distinguished Students in each Class.

Exhibitions and Prizes are also given by the Senate of the University to Students, in the Faculties of Arts and Medicine, and in the School of Engineering, who shall most distinguish themselves at the various University Examinations. (For further particulars, see pp. 32, 34, 36.)

The following will be competed for immediately after General Matriculation :—

Two Prizes for English Prose Composition and two for Geometry, given annually by the Senate of the University. The First Prize in each will be £3 worth of Books ; the second £2 worth of Books.

(The Subjects of Examination for Geometry Prizes will be found at p. 13).

A Prize of £5 will be offered by the College Council, at the opening of next Session, for proficiency in the French language.

These Prizes are open to Students who have just passed the Matriculation Examination for the first time.

MATRICULATION EXAMINATION.

The General Matriculation Examination will commence on *Tuesday, the 17th of October*, 1871.

The subjects in which Candidates will be examined are these :—

For the Faculties of Arts, Medicine, and Law.

Greek:—
Grammar.
Any one of the following Authors which the Candidate may select:—
    Homer—Iliad, Books I. and II.
    Xenophon—Anabasis, Books I. and II.
    Lucian—Walker's Selections.

Latin:—
Any one of the following Authors which the Candidate may select :—
    Virgil—Æneid, Books I. and II.
    Sallust—Conspiracy of Catiline.
    Cæsar—Gallic War, Book I.

English:—
Grammar—
    (1.) The principles of Etymology and Orthography.
    (2.) The leading Rules of Syntax.
Composition, and writing from dictation.
Outlines of Grecian History to the death of Alexander the Great.
Outlines of Roman History to the accession of Augustus.
Outlines of Ancient and Modern Geography.

Mathematics:—
Arithmetic—Principles of Notation. Vulgar and Decimal Fractions. Definition of the terms Ratio and Proportion. The Rule of Proportion, with its commercial applications. Involution. Single and Simple Interest.
Algebra—Explanation of the signs and meaning of an Index. Calculation of the values of Algebraical Expressions, when particular values are given to the letters which they involve.
Euclid—Book I., with the definitions and axioms.

For the Department of Civil Engineering.

The Outlines of Modern Geography.

Grammar.

Mathematics:—

> *Arithmetic*—Principles of Notation. Vulgar and Decimal Fractions, with the reasons of the different rules. Rule of Proportion, with its commercial applications. Extraction of the Square Root, both of whole numbers and decimals.
>
> *Algebra*—Explanation of the signs and meaning of an Index. Calculation of the value of Algebraic Expressions, when particular values are given to the letters which they involve.
>
> *Euclid*—Books I., II., III., IV., and VI., with the definitions of Book V.

The subjects of Examination for the University Geometry Prizes are:—
The first Four and Sixth Books of Euclid, with Definitions of the *Fifth Book,* and Geometrical deductions.

FACULTY OF ARTS.

DEGREES.

1. *Diploma of Licentiate in Arts.*

Candidates for this Diploma are required—
1. To have matriculated in one of the Colleges of the Queen's University.
2. To have pursued in one of the Colleges of the Queen's University the Course therein prescribed.
3. To have passed the University Examinations prescribed.

Fuller information on this subject will be found at p. 31.

2. *Degree of B.A.*

Students intending to proceed to this degree in the Queen's University must matriculate in one of the Queen's Colleges, and complete the course of study prescribed by the University Senate, by attending the College Lectures in each Session, and passing the Sessional Examinations.

The B.A. Examination takes place in the September after the close of the third Session, and Candidates must have previously passed the "First Examination in Arts," a preliminary examination which takes place at the commencement of the Third Session.

3. *Degree of M.A.*

Candidates for the Degree of M.A. are admitted to the University Examinations after that Degree one year after having taken the Degree of B.A.

LECTURES.

The Lectures in this Faculty for the Session 1871-72, will commence on *Monday, the 23rd October,* 1871.

The following Table shows the days and hours of Lectures for the ordinary course. In accordance, however, with the regulations of the University for the Degree of B.A., Students may substitute for one or two Courses in the third year a like number of Honor Courses:—

CLASS.	Terms.	Mon.	Tues.	Wed.	Thurs.	Fri.	Sat.	Fees.
								£ s. d.
English	2		11		11		10	1 0 0
First Session. Greek	1,2,3	10		9	10			2 0 0
Latin	1,2,3	9	10	10		9		2 0 0
Modern Languages ..	1,2,2	2		2		2		2 0 0
Mathematics (1st course)	1,2,3		12		12		12	2 0 0
College Fee								0 10 0
Logic	2		11		11			1 0 0
Second Session. Natural Philosophy ..	1,2,3		11		11		11	2 0 0
Greek (2nd Course) ..	1,2,3			9		9		2 0 0
Latin	1,2,3	10		10		10		2 0 0
Modern Languages ..	1,2,2	2		2		2		2 0 0
Mathematics	1,2,3		12		12		12	2 0 0
College Fee								0 5 0
English Language and	1,2		12		11		11	2 0 0
Literature, ...								
Third Session. Chemistry, ...	1,2,3	11		11		11		2 0 0
Metaphysics, or ..	1,2	1		1				
History, or	2,3	12		11	11	11		2 0 0
Political Economy, ..	1,3		11	11		11		
Zoology or Botany, ..	1,2,3	11		11		11		
College Fee, ...								0 5 0

HONOR COURSES.

By the regulations of the University Senate, a Student of the third year may substitute for two courses in the ordinary curriculum the same number of honor courses. For information regarding these, he may consult the Appendix, pp. 30, 31, 33, and also p. 24.

SCHOLARSHIPS.

In the Faculty of Arts, there are Thirty Junior and Seven Senior Scholarships. Of the former there are awarded—

To Students of the first year, 3 in Literature and 5 in Science.
"   second ,, 5   "   5   "

The Scholarship of the second year are held for two years under certain conditions. (See p. 11.)

The Senior Scholarships in Arts are tenable only by Graduates of less than two years' standing from the time of taking the Degree of B.A. They are thus appropriated:—

One in the Languages, Literature, and History of Ancient Greece and Rome.

One to Modern Languages, Literature, and History, viz., English Language, Literature, and Composition ; European and English History ; the French Language, with German or Italian.

One to Mental and Social Science, viz., Logic, Metaphysics, and Political Economy.

One to Mathematics, viz., Pure Mathematics.

One to Natural Philosophy, viz., Experimental Physics, and Mixed Mathematics.

One to Chemistry, viz., Theoretical and Practical Chemistry.

One to Natural History, viz., Zoology and Botany, Geology, and Physical Geography.

A Table of the Hours of Examination will be found at p. 25.

SUBJECTS OF EXAMINATION.

Subjects of Examination for Literary Scholarships of the First Year.

The Greek Language:
Homer.—The Iliad, Books I., II., III., IV., V., and VI.
Euripides—Phœnissæ.
Herodotus.—The Second Book.
Xenophon.—The Anabasis, Books I., II., III.
Lucian.—Walter's Selections.
Greek Prose.—Translation of short sentences from English into Greek.

The Latin Language:

Virgil—First six Books of the Æneid ; the Georgics.
Horace—First two Books of the Odes, the Satires, and the Epistles, Books I., II.
Cicero—De Senectute, De Amicitiâ.
Sallust—Conspiracy of Catiline, and Jugurthine War.
Cæsar—The Gallic War, Books V., VI.
Latin Prose—Re-translations from English into Latin, of portions of Cicero.
N.B.—The Examination in Greek and Latin will be conducted partly *vivâ voce*, and partly by printed questions.

The English Language:

Original Essays on subjects proposed by the Examiner. The Principles of English Grammar. The Laws of Etymology and Orthography. Craik's Outlines of the History of the English Language.

History and Geography:

Grecian History to the Death of Alexander the Great.
Roman History to the Accession of Augustus.
Outlines of Ancient and Modern Geography.

Subjects of Examination for Literary Scholarships of the Second and Third Years.

The Greek Language:

Homer—Odyssey, Books I., II., III., IV.
Euripides—Rhesus.
Thucydides, Book I.
Composition in prose and verse.

The Latin Language:

Virgil—Eclogues and Æneid.   Juvenal—Satires I., III., VIII., X.,
Horace.   XIII., XIV.
Terence—Heauton Timorumenos.   Livy, Book IV.
Cicero—Tusculan Disputations.   Tacitus—Histories, Book I.
  ,,   De Oratore.
Composition in prose and verse.

The English Language:

Craik's Outlines of the History of the English Language.
History of English Literature. Text-book, Chambers' Cyclopædia of English Literature, Vol. I., pp. 85–143.
Shakespeare's Julius Cæsar.
  ,,   King John.

The French Language:

Molière—L'Avare ; Le Misanthrope.
Lafontaine—Fables.
Histoire de la Littérature Française, par Demogeot.
Translation from English into French.

Subjects of Examination for Science Scholarships of the First Year.

Arithmetic.

Mensuration of Rectilineal Figures and of the Circle.

Algebra:

The Solution of Simple and Quadratic Equations, with one or more unknown quantities. Easy questions in the application of Algebra to Geometry. Arithmetical and Geometrical Progressions. The nature of Logarithms.

Euclid:

Books I., II., III., and IV., with deductions.

Trigonometry:

Definitions of the Sine, Tangent, &c., of an angle. The easier analytical formulæ. The Solution of Plane Triangles, with demonstrations. Nature and Use of the Tables.

*Subjects of Examination for Science Scholarships of the
Second and Third Years.*

The Higher Arithmetic, with Mensuration.

Algebra:

The Solution of Equations, with one or more unknown quantities. Elimination.
Theory and use of Logarithms. Theory of Equations. Binomial and Exponential Theorems. Compound Interest and Annuities.

Geometry:

Euclid, Books I., II., III., IV., VI., with demonstrations. Analytical Geometry.

Trigonometry:

The Solution of Plane Triangles, with demonstrations of the formulæ. Theorems relating to single arcs. Theorems relating to the sums and differences
of arcs. Application to heights and distances.

*For the Senior Scholarships in the Greek and Latin Languages, and Ancient
History.*

The Greek Language:

Aristotle—Nicomachean Ethics (Fitzgerald's Selections).
　　　Together with the subjects for the B.A. Honor Examination at the University.
Composition in Attic Prose and Iambic Verse.
Greek Literature and History.

The Latin Language:

Virgil.	Cicero—De Oratore.
Horace.	,,　　Tusculan Disputations.
Lucretius, Books I., II.	,,　　Ad Atticum, Books I., II.
Ovid—Fasti, Book I.	,,　　Actiones Verrinæ.
Persius.	Livy—Books IV. and XXII.
Terence—Andria and Heauton	Tacitus—The Annals, Books I. to IV.
Timorumenos.	inclusive.
Plautus—Capteivei and Pseudolus.	

Composition in prose and verse.

For Senior Scholarships in Modern Languages and History.

The French Language:

Lavalle—Histoire des Français.
Histoire de la Littérature Française, par Demogeot ou Nisard.

The German Language:

National Literature, von A. F. Vilmar.
Schiller's Maria Stuart.
Goethe's Iphigenie.
Translation from English into one of the above Languages.

English:

Language, Literature, and Composition.
History—Hallam's Middle Ages.
　　　　Chap. II., Part 1. The Feudal System.
　　　　Chap. VIII., Part 1, The Anglo-Saxon Constitution.
　　　　Chap. VIII., Part 2, The Anglo-Norman Constitution.
　　　　Chap. VIII., Part 3, The English Constitution.

The Italian Language:

Tasso—Gerusalemme Liberata—first five Cantos.
Dante's Inferno—Italian Literature, published by Messrs. Chambers.
Translation from English into French, German, or Italian.

For the Senior Scholarship in Mathematics.

The subjects of previous Examinations (for which see pages 15 and 16), with
the following additions :—

Analytical Geometry of Three Dimensions.
Differential Equations.

of Queen's College, Cork.   17

Appendix A.
General
Regulations
of College,
&c.

For the Senior Scholarship in Natural Philosophy.

Duhamel—Mécanique.
Brinkley—Elements of Astronomy, including the Appendix.
Parkinson's Optics.

For the Senior Scholarship in Mental and Social Sciences.

The subjects discussed in the Lectures of the Professors, with the following additions:—

Metaphysics and Logic:
  Sir William Hamilton's Philosophical Essays and notes on Reid.
  Mill—System of Logic, Book III. to the end of Volume I.

Political Economy:
  Principles of Political Economy, by John Stuart Mill.
  Taxation and Funding, by M'Culloch—third edition, 1863.
  The value attached to the subjects will be in the following proportions, viz.:—
    Metaphysics and Logic,   .   .   60
    Political Economy,   .   .   .   40

For the Senior Scholarship in Chemistry.

Inorganic Chemistry (in Miller's Chemistry).
  General principles of Chemical Philosophy. Modern views of Chemistry.
    Crystallography.
  Chemistry of the Metals. Constitution of Salts. Metallurgy.

Organic Chemistry:
  Ultimate analysis of Organic Bodies. Recent views of the constitution of
    Organic Bodies. Empirical and Rational formulæ. Determination of the
    density of Vapours. Law of Substitution. Homologous Series. Chemical
    Types. Preparation and Properties of the Alcohol Series and their Deriva-
    tives. Cyanogen, its Compounds and Derivatives. Organic Bases of Arti-
    ficial Origin.

Practical Chemistry:
  The Analysis of Mixtures, containing two or more Acids and Bases.

For the Senior Scholarship in Natural History.

The Lectures of the Professors.
  Henfrey—Elementary Course of Botany. (Second Edition, by Dr. Masters).
    Parts I. and III.
  Oliver—First Book of Indian Botany.
  Rolleston—Forms of Animal Life. The Introduction and Description of the
    Plates (pp. 167–259).
  Lyell—Students' Elements of Geology.

SCHOOL OF ENGINEERING.

To obtain the Degree in Civil Engineering, Students must matriculate in
Engineering, complete the prescribed Courses in one of the Queen's Colleges,
and pass the University Examinations. Of these there are two, the Prelimi-
nary Examinations at the commencement of the third Session, and the Final
Examination in the following September.

Fuller information will be found in the University Regulations, see p. 33.

LECTURES.

The Lectures in Engineering commence on Monday, 23rd October, 1871.
The following Table shows the various Classes which are to be attended in
each year, with the corresponding days and hours of Lecture, and the College
and Class Fee payable by Engineering Students:—

B

	CLASS.	Term.	Mon.	Tues.	Wed.	Thur.	Fri.	Sat.	Fees.
									£ s. d.
1st Session.	Mathematics (1st Course),	1, 2, 3	12	—	—	12	—		2 0 0
	Chemistry,	1, 2, 3	11	—	11	—	11		2 0 0
	Modern Languages,	1, 2, 3	9	—	9	—	9		2 0 0
	Geometrical Drawing,	1, 2, 3	10	—	10	—	10		2 0 0
	*Office Work (10 A.M. to 3 P.M.),	1, 2, 3	—	10	—	10	—	10	2 0 0
	Mineralogy, Geology, and Physical Geography,	1, 2, 3	—	2	—	—	2		2 0 0
	College Fee.,								0 10 0
2nd Session.	Mathematics (2nd Course),	1, 2, 3	2	—	2	—	2		2 0 0
	Experimental Physics,	1, 2, 3	—			—			2 0 0
	Civil Engineering,	1, 2, 3	—	10	—	10	—	10	2 0 0
	*Office Work (10 A.M. to 3 P.M.),	1, 2, 3	10	—	10	—	10		2 0 0
	College Fee.,								0 5 0
3rd Session.	Natural Philosophy, applied,	1, 2, 3	—	2	—	2	—		2 0 0
	Mathematical Physics,	1, 2, 3	1	—	1	—	1		2 0 0
	Civil and Mechanical Engineering,	1, 2, 3	12	—	12	—	12		2 0 0
	*Office Work (10 A.M. to 3 P.M.),	1, 2, 3	—	10	—	10	—	10	2 0 0
	College Fee.,								0 5 0

* For Students who have attended this Course in their first year, the Fee is £1.

SCHOLARSHIPS.

In the School of Engineering there are five Scholarships, two of which are appropriated to Students of the first year, two to those of the second, and one to those of the third. (See also p. 11.)

The hours of Examination will be found in the Table (p. 25.)

SUBJECTS OF EXAMINATION.

The Subjects of Examination for the Engineering Scholarships are as follows:—

Subjects of Examination for Engineering Scholarships of the First Year.

Arithmetic:
Measurement of Rectilineal Figures and of the Circle:

Algebra:
The Solution of Simple and Quadratic Equations, with one or more unknown qualities. Easy questions in the application of Algebra to Geometry. Arithmetical and Geometrical Progressions. The Nature of Logarithms.

Euclid:
Books I., II., III., and IV., with Deductions.

Trigonometry:
Definitions of the Sine, Tangent, &c., of an Angle. The easier analytical formulæ. The Solution of Plane Triangles with Demonstrations. Nature and use of the Tables.

Subjects of Examination for Engineering Scholarships of the Second Year.

Mathematics:
The same as for Science Scholarships in Arts of the Second Year, except that Spherical Trigonometry will be substituted for Analytical Geometry.

French:
Demogeot—Histoire de la Littérature Française.
Translation from English into French.

Chemistry:
Laws of Combination and Affinity. Preparation and Properties of the Chief Organic Substances. Metallurgic Operations. Mortars and Cements.

Geometrical Drawing—Descriptive Geometry—Orthographic Projection—Isometric Projection—Perspective—Geometry of Oblique Bridge.

Subjects of Examination for Engineering Scholarships of the Third Year.

Mathematics:—
Algebra—Theory of Equations and Methods of Approximation. Elimination. Summation of Series. Binomial and Exponential Theorems. Scales of Notation, &c.
Trigonometry—Plane and Spherical, with Astronomical applications.
Analytical Geometry, and Geometrical Conic Sections.
Differential Calculus—Involving demonstrations of the rules for differentiating Algebraic, Circular, and Exponential Functions, founded upon a clear statement of the nature of Limits and Definition of a Differential coefficient. Taylor's and Maclaurin's Theorems. Maxima and Minima. Criteria of the same, with proofs. Equation of Tangent, Normal, Evolute, &c.
Integral Calculus, including more particularly Rational Functions, Binomial Differentials, Areas of Curves, Rectification of Curves, Cubature of Solids of Revolution.

Natural Philosophy:—
Newth's Mechanics.
Ganot—Traité de Physique—Books VI., VII., VIII., IX.

Geology and Mineralogy:
Civil Engineering:
Instruments used by the Civil Engineer. Their adjustments and use. Surveying. Levelling.

FACULTY OF MEDICINE.

DEGREE OF M.D. AND M.CH.

Students who wish to obtain the Degree of M.D., or of M.Ch. in the Queen's University, must be matriculated Students of one of the Queen's Colleges, and must pursue the courses of study prescribed by the Senate of the University.

The Regulations of the Senate will be found at p. 35.

Medical Students may matriculate either at the General Matriculation Examination on 17th October, 1871, or at the Supplementary Examination held in the second or third week of *November.*

The mode of Matriculating and the Subjects of Examination will be found at pp. 10 & 12.

LECTURES.

The Medical Session will be opened on Thursday, 2nd of November, 1871, and the Courses of Lectures will commence as under:—

ANATOMY AND PHYSIOLOGY—Thursday, 2nd November, at One o'clock, to be continued daily, except on Saturdays, at the same hour.

PRACTICE OF MEDICINE—Friday, 3rd November, at Three o'clock, to be continued on Mondays, Wednesdays, and Fridays, at the same hour.

PRACTICE OF SURGERY—Thursday, 2nd November, at Four o'clock, to be continued on Tuesdays and Thursdays, at Four o'clock, and Saturdays, at One o'clock.

MATERIA MEDICA—Thursday, 2nd November, at Three o'clock, to be continued on Tuesdays and Thursdays, at Three o'clock; and on Saturdays, at Twelve o'clock.

MEDICAL JURISPRUDENCE—Thursday, 2nd November, at Twelve o'clock, to be continued on Tuesdays and Thursdays, at the same hour, and on Fridays at One o'clock.

MIDWIFERY—Friday, 3rd November, at Four o'clock, to be continued on Mondays, Wednesdays, and Fridays, at the same hour.

The Course of PRACTICAL ANATOMY will be conducted by the Professor of Anatomy and Physiology, assisted by Demonstrators.

B 2

The ANATOMICAL DEMONSTRATIONS will commence on 3rd of November, and be continued daily at Twelve o'clock, except Saturdays.

CHEMISTRY—Monday, Wednesday, and Friday, at Eleven o'clock.

PRACTICAL CHEMISTRY—Monday, Wednesday, and Friday, at Two o'clock. (See note, p. 24.)

ZOOLOGY AND BOTANY—Monday, Wednesday, and Friday.

NATURAL PHILOSOPHY—Tuesdays and Thursdays.

MODERN LANGUAGES—Monday, Wednesday, and Friday.

The following Curriculum is recommended for all Medical Students:—

FIRST YEAR.

Anatomy and Physiology.
Chemistry.
French or German.
Natural Philosophy.
Zoology and Botany.

SECOND YEAR.

Anatomy and Physiology.
Materia Medica.
Practical Anatomy.
Practical Chemistry.

THIRD YEAR.

Surgery.
Midwifery.
Practical Anatomy.

FOURTH YEAR.

Practice of Medicine.
Medical Jurisprudence.

NOTE.—The 17th of November will be the last day for entering for the Six Months' Courses of Lectures in the above Curriculum. All the Lectures are recognised by the Queen's University in Ireland, by the Universities of London, Glasgow, Aberdeen, and St. Andrew's; the Colleges of Surgeons of Dublin, Edinburgh, and London; by the Apothecaries' Companies, by the Army, Navy, and East India Medical Boards, &c., &c.

TABLE OF FEES.

FIRST YEAR.	£	s.	d.	THIRD YEAR.	£	s.	d.
Anatomy and Physiology, .	3	0	0	Practical Anatomy, .	3	0	0
French, ...	2	0	0	Midwifery, . .	2	0	0
Natural Philosophy, .	2	0	0	Surgery, . .	3	0	0
Natural History, . .	2	0	0	College Fee, .	0	5	0
Chemistry, . . .	3	0	0				
College Fee, . .	0	10	0				
SECOND YEAR.				FOURTH YEAR.			
Anatomy and Physiology, if a Second Course, .	2	0	0	Medical Jurisprudence, .	2	0	0
Practical Anatomy, .	3	0	0	Medicine, . .	2	0	0
Practical Chemistry, .	3	0	0	College Fee, .	0	5	0
Materia Medica, .	3	0	0				
College Fee, . .	0	5	0				

SCHOLARSHIPS.

There are Eight Scholarships in the Faculty of Medicine, which are thus allotted :—

To the First Year—Two—One for Literature and one for Science.

   ,,   Second do.   Two.

   ,,   Third do.   Two.

   ,,   Fourth do.   Two.

For other details regarding these Scholarships, see p. 21.

The times of examination will also be found at p. 25.

of Queen's College, Cork.

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Appendix A.

General
Regulations
of College,
&c.

SUBJECTS OF EXAMINATION.

SCHOLARSHIPS OF FIRST YEAR.

1. *Literary Scholarship.*

The Greek Language:

Homer—The Iliad, Books I., II., III., IV., V., and VI.
Euripides—Phœnissæ.
Herodotus—The Second Book.
Xenophon—The Anabasis, Books I., II., III.
Lucian—Walker's Selections.
Greek Prose—Translation of short sentences from English into Greek.

The Latin Language:

Virgil—First Six Books of the Æneid, the Georgics.
Horace—First Two Books of the Odes, the Satires, and the Epistles, Books I., II.
Cicero—De Senectute, De Amicitia.
Sallust—Conspiracy of Cataline and Jugurthine War.
Cæsar—The Gallic War, Books V., VI.
Latin Prose—Re-translations from English into Latin of portions of Cicero.
N.B.—The Examination in Greek and Latin will be conducted partly *vivâ voce*, and partly by printed questions.

The English Language:

Original Essays on subjects proposed by the Examiner. The Principles of English Grammar. The Laws of Etymology and Orthography. Craik's Outlines of the History of the English Language.

History and Geography:

Grecian History to the Death of Alexander the Great.
Roman History to the Accession of Augustus.
Outlines of Ancient and Modern Geography.

2. *Science Scholarship.*

Arithmetic:

Mensuration of Rectilineal Figures and of the Circle:

Algebra:

The Solution of Simple and Quadratic Equations, with one or more unknown quantities. Easy questions in the application of Algebra to Geometry. Arithmetical and Geometrical Progressions. The Nature of Logarithms.

Euclid:

Books I., II., III., and IV., with Deductions.

Trigonometry:

Definitions of the Sine, Tangent, &c., of an Angle. The easy analytical formulæ. The Solution of Plane Triangles with Demonstrations. Nature and use of the Tables.

Scholarship of the Second Year.

Anatomy and Physiology.	General Physics.
Chemistry.	Zoology and Botany.

The French Language.

Scholarship of the Third Year.

Anatomy and Physiology.	Materia Medica.
Practical Anatomy.	Practical Chemistry.

Scholarship of the Fourth Year.

Anatomy and Physiology.	Pathology and Morbid Anatomy.
Practical Anatomy.	Surgery.
Therapeutics.	Midwifery.

FACULTY OF LAW.

LECTURES.

The complete Course for each Class consists of Twenty-four Lectures, by the Professor of English Law, in each Collegiate Session; and of Twenty-four Lectures in each course of the first two years, by the Professor of Jurisprudence. The Lectures are delivered in the months of December, February, and March. Five-sixths of the Lectures in each Course must be attended.

Students intending to proceed, so as to entitle themselves to serve an apprenticeship of four years instead of five, under the Attorney' and Solicitors' Act, Ireland, 1866, must enter their names with one of the Registrars of the Queen's Colleges of Cork, Belfast, or Galway, and pay the necessary College and Class Fees to the Bursar before the commencement of the Law Lectures in each Session.

Such Students must not pass the Matriculation Examination, but must attend the Lectures, and pass the College Examinations prescribed for the first and second years, of the course of study for Candidates for the Diploma in Elementary Law.

DEGREES IN LAW.

Candidates for the Diploma of Elementary Law must have passed a Matriculation Examination (see page 10), and pursued the following

Course of Study for the Diploma of Elementary Law.

First Session—Law of Real Property and Principles of Conveyancing—Jurisprudence.

The Course of the Professor of English Law for the First Year's Class comprises Elementary Instruction in the " The Law of Real Property," and in practical Conveyancing. The text-books read are " Williams on Real Property."

The following works are recommended for perusal:

Blackstone's Commentaries, by Stephen, Vol. I., and Vol. II. of Kerr's edition of the same work.

Second Session—Law of Personal Property, Equity, and Bankruptcy—Civil Law.

The Course of the Professor of English Law for the Second Year's Class comprises instruction in The Law of Personal Property, Equity, Bankruptcy, and the practice relating to those branches of Law. The text-books read are, " Smith on Contracts," " Williams on Personal Property," and " Smith's Manual of Equity."

The following are recommended for perusal;

Blackstone's Commentaries, by Stephen, Vol. II., same, by Kerr, Vol. I., Smith's " Mercantile Law," Story's " Equity Jurisprudence," Vol. I.; the Bankruptcy and Insolvency Act, 1857.

Third Session—Common and Criminal Law.

The Course of the Professor of English Law for the Third Year's Class comprises the History, Constitution, and Jurisdiction of the several Courts of Justice, and their Procedure. The text-books are the third and fourth volumes of Blackstone's Commentaries, editions by Stephen and Kerr.

The following works are recommended for perusal:

Broom's Common Law," " Broom's Legal Maxims," " Smith's Leading Cases," " Copinger's County Courts," by Johnston; Ferguson's Common Law Procedure Acts, 1852 and 1856, Woolrych's Criminal Law, or Russell on Crimes.

Candidates for the Degree of LL.B. will be admitted to Examination for that Degree from the Queen's University in Ireland, provided they shall have proceeded to the Degree of A.B., and shall have attended the Lectures and passed the Examinations prescribed for the Diploma of Elementary Law.

Students who have obtained the Degree of LL.B. will, on the expiration of two years after they have obtained the Degree, be admitted to the Examination for the Degree of LL.D. They are examined in the Law of the Admiralty and Ecclesiastical Courts of England and Ireland, and in International Law, for which Examination the following Books are suggested:—

Lord Hale's Treatise, *De Jure Maris*.

Dr. Phillimore's (permanent) statement of the differences in Jurisdiction and Practice between the English and Irish Courts of Admiralty, annexed to the Report of the Royal Commission of Inquiry, 1864.

Rogers' Ecclesiastical Law.

Wheaton's International Law.

"Historicus," Letters of, on International Law.

Law Scholarships.

Subjects of Examination.

First Year:—Examination by the Professor of Jurisprudence:—
Roddie's Inquiries in the Science of Law.
Adam Smith's Wealth of Nations—Book III.
Hallam's Middle Ages—Chap. 3 and .

Examination by the Professor of English Law.

Williams—Principles of the Law of Real Property.

Second Year:—By Professor of Jurisprudence.
The Lectures of the Professor in the First Year (see note).
Ancient Law, by S. H. Maine.
The Chapters on Social Science in J. S. Mill's Logic—Book VI., Chap. 6,
   to end of the Book.
Austin's Jurisprudence, Vol 1, 3rd Edition.

By Professor of English Law.
The Lectures of the Professor for the preceding years.
Smith—Manual of Equity Jurisprudence.
Williams—Principles of the Law of Personal Property.
Smith—On Contracts.

Third Year:—By Professor of Jurisprudence.
Austin's Jurisprudence, Vol. 2, 3rd Edition.
Sandar's Justinian, and the Lectures of the Professor, in the first and second
   years.

Note.—The following works, in addition to the text-books mentioned, should
be referred to in connexion with the principal subjects discussed in the Lectures
on Jurisprudence:—
Dumont's Bentham (translation by Hildreth), "Principles of Legislation," and
   1st and 2nd parts of the "Principles of the Civil Code."
Stephens' "Criminal Law."
Spence's Equity Jurisprudence. Vol. I., Part I.
Maccleavie's Roman Law.

By Professor of English Law.
The Lectures of the Professor for the preceding years.
Smith—Leading cases on branches of the Law.
Storey—Equity Jurisprudence.

The Senior Law Scholarship will be awarded, by Examination, to the most
distinguished Student who shall have proceeded in the Course of Arts to the
Degree of A.B., and who shall have completed the Course of Legal Study pre-
scribed to Candidates for the Degree of LL.B. in the Queen's University in
Ireland.

Examination for the Senior Scholarship in Law.

The Lectures of the Professors and subjects appointed for Scholarship Exami-
nation in the preceding years.
Sugden—The Law of Vendors and Purchasers.
Furlong—Law of Landlord and Tenant.
Taylor—Treatise on the Law of Evidence.
Stephen—Treatise on the Principles of Pleading.
Stephen—Commentaries, Books V., VI.
Hallam—Constitutional History.
Broom's Constitutional Law.
Spence's Equity Jurisprudence, Vol. I., Part I.

REGULATIONS CONCERNING FEES.

1. All Fees are to be paid to the Bursar, at his Office in the College.
2. Candidates for Matriculation are required to pay their *College Fees*
before being admitted to Examination.
3. Students must pay their Class Fees before being admitted to the Classes;
and if Candidates for Scholarships, must do so on or before the day previous to
the date of Examination. (See also p. 11).
4. Half the Class Fees are returned to Scholars; but this rule does not
extend to Exhibitioners.
5. With reference to the Fee payable for repeated attendance on the same
Course of Lectures, the following rule has been laid down in the Statutes:—
The Fees payable by Students, whether Matriculated or Non-matriculated,
to the several Professors, for attendance on the several Pass Courses of Lectures

Appendix d. or instruction, which are now or may be hereafter prescribed by the College

General Regulations of College, &c. Council, for any Degree or other University distinction, shall be £1 for each Course extending over one Term only, and £9 for each Course extending over more than one Term of a Session, when attended for the first time, and £1 for each re-attendance on the same; except that the Fee payable for the Course of Anatomy and Physiology shall be £3 when attended for the first time, and £2 for every subsequent attendance; except also, that the Fee payable for Practical Anatomy or Practical Chemistry, shall be £3 for each attendance.

In the case of Students receiving special instructions, not prescribed as a qualification for a Degree or other University distinction, or attending Honor Courses of Lectures, the Council shall have power to fix the amount of the Fee to be paid by each Student; provided that the Fee to be paid for any Honor Course of Lectures which Students are entitled to substitute for a prescribed Pass Course, shall in no case be less than £2.

TABLE OF HOURS OF LECTURE.

Name of the Class.	Monday.	Tuesday.	Wednesday.	Thursday.	Friday.	Saturday.
Senior Greek	9	9	9		9	
Junior Greek	10		9	10	10	
Extra Greek	10		9		10	
Senior Latin	10		9		10	
Junior Latin	9	10	10	10		
Extra Latin		11		11		
English Language		11		11		10
English Literature		12		12		11
History	12		12			
Medical French	12		12		12	
Senior French (*Arts and Engineering*)	1		1			
Junior French (*Arts and Engineering*)	2		2			
German or Italian	2		2		9	
Celtic Languages		11		11		
Logic		11		11		9
Metaphysics	1		1			
Political Economy and Jurisprudence		11	11	11	11	
Senior Mathematics	3		3	3		
Junior Mathematics	12		12	12		
Third Year's Mathematics	3		3			
Mathematical Physics		3		12		
Mathematical Physics (*Engineering*)	1		1			
Experimental Physics, Senior	11		11	11		
Experimental Physics, Junior	11		11			
Engineering Physics	1		1			
Physics (*Honor*)		12		12		
Chemistry	11		11	11		
Practical Chemistry *	2		2			
Zoology and Botany	3		3	3		
Geology and Mineralogy	2		2			
Senior Engineering	12		10	10	10	
Junior Engineering		10		10		10
Geometrical Drawing	10		10	10		
Office Work (10 till 2)	10		10		10	
Anatomy and Physiology	1	1	1	1		
Practical Anatomy	12	12	12	12	12	
Medicine		3		3		
Surgery	4		4			12
Materia Medica	4		4			12
Midwifery	4		4			
Medical Jurisprudence		12		12		
English Law (1st year)	11	11	11	11	11	
English Law (2nd year)	3	3	3	3		
English Law (3rd year)	9	9	9	9		
English Law (4th year)	12	12	12	12		
Jurisprudence	1	1	1	1		
Civil Law	4	4	4	4		
Constitutional and International Law	10	10		10		

* If it be necessary to divide the Practical Chemistry Class, the hours for the Second Class will be at two on Tuesday and Thursday, and eleven on Saturday.

PROGRAMME OF THE TIMES AND SUBJECTS OF THE SCHOLARSHIP EXAMINA- *Appendix A.*
TIONS FOR THE SESSION 1871-72.

Examination Days.	From 9 to 12 o'clock.	From 2 to 5 o'clock.	General Regulations of College, &c.
Thursday, October 19th,	Greek. Geometrical Drawing. Surveying.	Greek. Geology and Mineralogy. Surgery.	
Friday, October 20th,	Latin. Natural Philosophy.	Mathematics. Practical Chemistry.	
Saturday, October 21st,	Modern Languages. Political Economy.	Pathology. Latin.	
Monday, October 23rd,	Materia Medica. Therapeutics. English Language (1st year) and Literature.	Zoology and Botany. Practical Anatomy. History and English Lit. (senior).	
Tuesday, October 24th,	Chemistry.	Anatomy and Physiology. Logic and Metaphysics.	
Friday, Dec. 1st,	English Law.	Civil Law.	

APPENDIX I.

Outlines of the Courses of Lectures delivered by the Professors of the Faculty of Arts.

THE GREEK LANGUAGE.

Professor, JOHN RYALL, LL.D.

Junior Class : Monday, Wednesday, Thursday, and Friday.
Second Year : Monday, Tuesday, Wednesday, and Friday.
Third Year : Tuesday, Thursday.
Exercises in Prose and Verse, according to the proficiency of the Students.

THE LATIN LANGUAGE.

Professor, BUNNELL LEWIS, M.A., F.S.A.

Senior Class, Monday, Wednesday, and Friday :
    Juvenal—Satires, I., III., IV., V.
    Cicero—De Officiis, Book II.
Junior Class, Monday, Tuesday, Wednesday, and Thursday :
    Tacitus—Germania.
    Virgil—Georgics, Book III.
Exercises in both Classes chiefly from Arnold's Introductions to Latin Composition.
Extra and Third Year's Class, Tuesday and Thursday :
    Tacitus—Histories, Part of Book III.
    Martial—Paley's Selections.
In this Class special attention is paid to original Composition, and to translation from English Authors into Latin.

HISTORY, ENGLISH LITERATURE, AND THE ENGLISH LANGUAGE.

Professor, GEORGE ARMSTRONG, M.A.

1st and 2nd   { History—Monday, Wednesday, and Friday.
  Term.   { English Literature—Tuesday, Thursday, and Saturday.
2nd Term—The English Language—Tuesday, Thursday, Saturday.

History :
  1. European History—From the Decline of the Roman Empire to the present time.
  2. History of Britain and Ireland.

English Literature:
The Course will include the History of English Literature, along with a Critical
Examination of the Standard Works from the earliest period up to the pre-
sent day.

The English Language:
1. The History of the English Language.
First Year.—Text Book, Craik's Outlines.
Third Year.—Text Books, Max Müller on the Science of Language.
Marsh's Lectures.

2. Grammar and Composition.
Text Books, Latham—English Language.
Adams—Elements of the English Language.
Rushton—Rules and Cautions in English Grammar.
Campbell's Philosophy of Rhetoric.
Whately's Rhetoric.

English Composition.
Essays on subjects discussed in the Lectures. Translations: Analysis.
Original Essays.

MODERN LANGUAGES.

Professor, R. DE VERICOUR, M.A.

French Class (Medical), Mondays, Wednesdays, and Fridays, at 12 o'clock.
Senior French (Arts and Engineering), Mondays, Wednesdays, and Fridays,
at 1 o'clock.
Junior French Class (Arts and Engineering), Mondays, Wednesdays, and
Fridays, at 2 o'clock.
German or Italian, Tuesdays and Fridays, at 2 o'clock.

Medical French.—Progrès des Sciences Médecales, par S. Garnier. Extracts
from Bichat, Andral, Lallemand, and Chomel. Weekly Lectures on the
Grammar and Idioms.
Senior and Junior French.—Textes classiques de la Littérature Française par
S. Demogeot. Fables de Lafontaine. Racine's Athalie, and Esther. His-
toire de la Revolution Française, par Mignet. Le Misanthrope and L'Avare
of Molière. Histoire de la Littérature Française, par Demogeot. Weekly
Lectures on the Grammar and Idioms.
Italian.—Silvio Pelico. Tasso. Extracts from Macchiavelli, Guicciardini,
Manzoni. Weekly Lectures.
German.—Goethe's Ballads and Iphigenie. Schiller's Wilhelm Tell. National
Literature, Von A. F. Villmar. Weekly Lectures.

SPECIAL COURSE NOT REQUIRED FOR A DEGREE.—CELTIC LANGUAGES.

Professor, OWEN CONNELLAN, Esq.

Monday, Wednesday, and Friday.
Subject—I. The Celtic Family of Languages ; and its existing derivations, the Erse
or Gaelic, Manx, Welsh, Armorican, and Hiberno-Celtic. The
Ogham Alphabet The Ancient Literature of Ireland, viz. :—The
earlier Bardic Compositions, the Ossianic Poems and Fenian Le-
gends ; View of the Contemporaneous state of Ireland.*
II. The Irish Language as now extant, its Grammar, Vocabulary, and
Dialects. In this part of the course, the Student will be taught to
speak and write the language grammatically.
* The Lectures will be illustrated by reference to Irish MSS.,* and such publica-
tions on Irish Historical and general Literature as are at present accessible.

SCIENCE DIVISION OF THE FACULTY OF ARTS.

MATHEMATICS.

Professor, CHARLES NIVEN, M.A.

Junior Class, Monday, Wednesday, and Friday.
Subjects—Arithmetic, Algebra, Geometry, and Plane Trigonometry

Second Year's Class, Monday, Wednesday, and Friday.
Subjects—Analytical Geometry, Trigonometry, Differential and Integral Calculus.

Third Year's Class :
Subjects—Geometry of three dimensions, Differential Equations, &c.
Exercises are regularly set in each of the Classes.

LOGIC AND METAPHYSICS.

Professor, GEORGE SIDNEY READ, M.A.

2nd Term,   . Logic,   . Tuesday, Thursday, and Saturday.
1st & 2nd Terms, Metaphysics,   Do.   do.   do.

Logic.—This Course consists of :—

    I.—Lectures, Examinations, and Exercises in Aldrich's Compendium of Logic, occupying the early part of the Term, &c.

    II.—A full discussion of Classification, the Theory of Hypothetical Syllogisms and of Induction, and the Analytic of Logical Forms, as contained in the works of Mill, Whately, Thompson, and Baynes.

Throughout the Course the Students will be expected to familiarize themselves with the reduction of arguments to their strict Logical Form by written exercises, which will be examined by the Professor.

Metaphysics.—This Course will embrace :—

    I.—The Philosophy of the Inductive Sciences, illustrated by reference to Lord Bacon, Whewell, and Mill ; and—

    II.—The History of Mental Philosophy, comprising—
        1st.—The origin, progress, and development of Modern Philosophy anterior to the rise of the Scottish School.
        2nd.—A critical examination of the works of the more celebrated writers of that School.
        3rd.—A brief view of the present state of Philosophy in the British Islands and on the Continent.

POLITICAL ECONOMY.

Professor, RICHARD HORNER MILLS, M.A.

Political Economy.—The nature and distribution of wealth, the principles which regulate Rents, Profits, and Wages; the Principles of Commerce, of Taxation, of the Funding System, and of Currency and Banking.

Books recommended :—

    Adam Smith—Wealth of Nations.
    Senior—Political Economy.
    Fawcett's Manual of Political Economy.
    John Stuart Mill—Political Economy.
    Richard H. Mills—Lectures on Currency and Banking (Second Edition).
    M'Culloch—Taxation and Funding (Third Edition).
    Goschen on Foreign Exchanges.

The Course consists of Twenty-four Lectures, delivered in the months of December, February, and March; the Students are required in the intervals to prepare the subjects which will be pointed out by the Professor.

CHEMISTRY.

Professor, MAXWELL SIMPSON, M.D., F.R.S.

Monday, Wednesday, and Friday.

The Course is divided into Inorganic and Organic Chemistry.

In the first part are discussed the Laws of Combination and Affinity, Molecular Chemistry and Crystallography, and the History of the Non-Metallic and Metallic substances.

In the Organic portion of the Course will be considered the subjects of Organic Analysis, Organic Series, Compound Radicals and Types, Metamorphosis of Organic Bodies, History of special Animal and Vegetable Bodies.

In treating of the Laws of Chemistry, and the History of Inorganic and Organic Bodies, those points will be chiefly dwelt upon which have a practical bearing

in the Arts, Medicine, Engineering, and Agriculture. Thence, during the Course, attention will be directed to the application of Chemistry to Medicine and Physiology, to Metallurgic Operations, Chemical Manufactures, Building Materials, Soils, Manures.

Fee, for each Sessional Course, £2. Each subsequent Course in Medicine, £1.
Text Books recommended—Roscoe, Williamson, Fowns, Miller, Regnault.

Analytical Chemistry:

The Chemical Laboratory is open daily, except on Saturdays, from 10 to 4 o'clock, under the superintendence of the Professor, to students desirous of prosecuting an extended course of qualitative and quantitative analysis, and for the purpose of original investigation in connexion with the arts, or the higher departments of Scientific Chemistry.

NATURAL PHILOSOPHY.

Professor, JOHN ENGLAND, M.A.

Experimental Physics (Senior):

Text Books—Galbraith and Haughton's Manuals on Mechanics, Hydrostatics, &c.; Jamin; Traité de Physique.

Experimental Physics (Junior):

Text Books—Ganot, Traité de Physique.

Mathematical Physics:

Text Books—Duhamel's Mecanique. Parkinson's Optics. Brinkley's Astronomy.

Engineering Physics:

Text Books—Tate's Exercises in Mechanics, selections from the works of Mozely, De Pambour, Weisbach, Twisden's Practical Mechanics, &c.

NATURAL HISTORY.

Professor, JOSEPH REAY GREENE, B.A., M.D.

Monday, Wednesday, and Friday.

The Professor of Natural History will deliver a course of Lectures on Zoology and Botany.

Students may obtain Certificates of Attendance on either or both of these subjects. The Zoological part of the course will extend from the first Lecture-day in November to the end of February. The Botanical Lectures will occupy the remainder of the Session.

The Course will be arranged as follows:—

ZOOLOGY.

(About Forty Lectures.)

INVERTEBRATE ANIMALS (First Term)—Plants and Animals; the Animal Kingdom; the Lowest Animals; Infusories; Sponges; Coelenterate Animals; Hydrozoans; Anthozoans and Beroïds; Molluscoids; Brachiopods; Lamellibranchs; Gasteropods; Cephalopods; Echinoderms; the Lower Worms; the Higher Worms; Crustaceans; Insects (Arachnida and Myriapoda); Insects (Hexapods); Review of the Higher Invertebrates.

VERTEBRATE ANIMALS (Second Term)—Vertebrate Animals; Leptocardians and Fishes; Marsiobranchs and Elasmobranchs; Ganoids and Sireoids; Teleosteans; Batrachians; Reptiles; Ophidians and Lacertilians; Crocodilians and Chelonians; Extinct Reptiles; Birds; Typical Birds; Aberrant Birds; Mammals; Aplacental Mammals; Edentate and Mutilate Mammals; Ungulate Mammals; Micromammals; the Higher Mammals; Review of the Animal Kingdom.

BOTANY.

Thirty Lectures.

GENERAL BOTANY.—The parts of Plants; Protoplasm and Vegetable Cells; Tissues of Plants; the Life of Plants; Classification of Plants.
CRYPTOGAMIC BOTANY.—Cryptogamae; Algæ; Mycetes; Mosses and allied Plants; Vascular Cryptogams.

GENERAL MORPHOLOGY OF PHENOGAMS.—The Stem; Buds and Branches;   *Appendix.*
Roots; Leaves; Flowers; the Fruit; the Seed; Homologies of Phenogams.

SPECIAL MORPHOLOGY OF PHENOGAMS.—Dicotyledons; Thalamifloralis;   General
Disciflorals; Calyciflorals; Epigynous Gamopetals; Apogynous Gamope-   *Regulations*
tals; Apetals; Gymnosperms; Monocotyledons; Epigynous Monocotyle-   *of College,*
dons; Apogynous Monocotyledons; Glumifloralis.   *&c.*

Text Books—

Henfrey.—Elementary Course of Botany. (Second Edition, by Dr. Masters.)
Huxley.—Introduction to the Classification of Animals.

The following are also recommended:—

Hooker, J. D.—Student's Flora of the British Islands.
Lindley.—Descriptive Botany.
Oliver.—First Book of Indian Botany.
Rolleston.—Forms of Animal Life.

Those who wish fully to profit by the above Lectures would do well to read, before attending them, Huxley's Lessons in Elementary Physiology and Oliver's Lessons in Elementary Botany.

GEOLOGY AND MINERALOGY.

Professor, ROBERT HARKNESS, F.R.S.L. & E., F.G.S.

Tuesday, Thursday, and Saturday.

General Structure of the Earth; the causes at present in operation which modify its surface; Nature of Rocks which enter into composition with the crust of the Globe; description and classification of Sedimentary Deposits; Organic Remains; Physical Geography of the Earth during the several geological epochs; characters and nature of Igneous, Plutonic, and Metamorphic Rocks; Mineral Veins,—their contents and mode of occurrence; application of Geology to Engineering and Mining.

Forms, Structure, Physical and Chemical characters of Minerals; descriptions of the most important simple minerals—circumstances and conditions under which they are found.

Text Books—Lyell's Students Elements of Geology—Herschel's Physical Geography—Nicol's Manual of Mineralogy.

CIVIL ENGINEERING.

Professor, ALEXANDER JACK, M.A.

FIRST YEAR—Monday, Wednesday, and Friday.

Subject of Lectures—Orthographic Projection; Descriptive Geometry; Shadows; Isometric Projection; Perspective; Geometry of the Oblique Bridge; Principles of Architecture.

Text Books—Hall's Descriptive Geometry; Engineer and Machinist's Drawing Book; Rickman's Architecture; Buck on Oblique Bridges.

SECOND YEAR—Tuesday, Thursday, and Saturday.

Subject of Lectures—Surveying and Levelling.

Text Books—Rankine's Civil Engineering; Cotton's Manual of Railway Engineering; Williams' Geodesy.

THIRD YEAR—Monday, Wednesday, and Friday.

Materials used in Construction; Principles of Construction of Bridges, Roads, Railways, Canals; Hydraulic Engineering; Strength of Materials; Principles of the Construction of the different Machines employed by the Engineer.

DRAWING OFFICE—Attended by all the Classes—Tuesday, Thursday, and Saturday.

The First Year's Class are closely employed in drawing the problems given at lectures, and a few easy examples of their applications. The Second and Third Years' Classes, in making working drawings of examples of the subjects of lectures, and in Mapping.

Practical Instruction in the Field in the use of Surveying Instruments will be given during the Session.

APPENDIX II.

Degrees in the Faculty of Arts.

*Course for the Degree of Bachelor in Arts.**

Candidates for the Degree of Bachelor in Arts are required—

1. To have been admitted Matriculated Students of the Queen's University in the Faculty of Arts.
2. To have subsequently studied in one of the Colleges of the Queen's University the Course herein prescribed.
3. To have passed the University Examinations herein prescribed.

The Course for the Degree of Bachelor in Arts shall extend over three Sessions, and shall comprise attendance on the following curriculum:—

FIRST SESSION.

English (One Term).
Greek.
Latin.
A Modern Continental Language.
Mathematics (First Course).

SECOND SESSION.

Logic (One Term).
Natural Philosophy.

Along with any two of the following:—

Greek (Second Course).
Latin (Second Course).
Modern Continental Languages (Second Course).
Mathematics (Second Course).

THIRD SESSION.

English Language and Literature.
Metaphysics, or History, or Political Economy (Two Terms).
Chemistry.
Zoology, or Botany.

Attendance on these Courses shall, in all cases, be understood to include passing such examinations as may be appointed by the College Council, and the catechetical parts of the Courses of Lectures.

Candidates for the Degree of Bachelor of Arts shall reside at their respective Colleges during at least the first two terms of each Session, but may be exempted from residence during the third term by a special grace of the College Council.

Third year's Students may substitute attendance on one or on two Courses of Honor Lectures, for a like number of the Courses above set down for study in the third Session.

Candidates for the Degree of Bachelor in Arts shall pass two University Examinations—a Preliminary and a Degree Examination.

The Course for the Preliminary Examination shall include Greek, Latin, a Modern Continental Language, and Mathematical Science. Students who have completed their second Session must pass this Examination before rising to the third year, unless prevented by illness or other inevitable accident, in which case the Senate may admit them to a Supplementary Examination.

Candidates who have completed the Undergraduate Course, may offer themselves at the Degree Examination for graduation either with Honors or without Honors.

If they seek to graduate with Honors, they may select for their Examination any one of the following groups:—

Greek and Latin.
Modern Continental Languages.
Mathematical Science.
Experimental Science.
Natural Science.

* His Royal Highness the Commander-in-Chief has approved of Graduates of the Queen's University being in future exempted from the usual Examination for direct Commissions; and also of their First University Examination being accepted in lieu of that for the Royal Military College, Sandhurst.

Or any three of the following:—

English Language and Literature.
Metaphysics.
History.
Political Economy.
Logic.

Candidates who seek the Degree without Honors, may select for their Examination any group of the subjects from the following lists, provided the sum of the numbers attached in this list to the selected subjects be at least four :—

English Language and Literature,	2	Latin,	.	1
Mathematical Sciences,	.	2	Each Modern Continental Language,	1
Experimental Physics,	.	2	Logic,	.	1
Chemistry,	.	.	2	Metaphysics,	.	1
Zoology,	.	.	1	History,	.	1
Botany,	.	.	1	Political Economy,	.	1
Greek,	.	.	1			

English Composition will form a part of all University Examinations.

2. COURSE FOR THE DEGREE OF MASTER IN ARTS.

Bachelors in Arts of one year's standing, may offer themselves for Examination for the Degree of Master in Arts, and may select for their Examination any one of the following groups :—

Greek and Latin.
Modern Continental Languages.
Mathematical Science.
Experimental Science.
Natural Science.

Or any three of the following:—

English Language and Literature.
Metaphysics.
History.
Political Economy.
Logic.

This Ordinance supersedes former Ordinances prescribing the curriculum for the Degree of Master in Arts.

3. COURSE FOR THE DIPLOMA OF LICENTIATE IN ARTS.

A Diploma conferring the title of Licentiate in Arts of the Queen's University in Ireland, shall be granted to Candidates who comply with the following regulations :—

Candidates for this Diploma are required—

1. To have matriculated in the Queen's University.
2. To have pursued in one of the Colleges of the Queen's University the Course herein prescribed.
3. To have passed the University Examination herein prescribed.

The Course for the Diploma of Licentiate in Arts shall extend over two Sessions, and shall comprise attendance on the following curriculum:—

FIRST SESSION.

Two Languages, of which one may be English.
Mathematics.
Another Course on any subject in the annexed list.

SECOND SESSION.

Greek, Latin, or a Modern Continental Language.
Logic (One Term).
Natural Philosophy.
And two other Courses on subjects in the annexed list.

If any of the Courses, except that on Logic, extend over one Term only, some other Course from the annexed list must be attended as a supplement to it, but not necessarily in the same Session.

Credit will not be given for attending the same Course of Lectures a second time.

Attendance on the Courses shall, in all cases, be understood to include passing such Examinations as the College Council shall appoint, and the catechetical parts of the Courses of Lectures.

Candidates for the Diploma of Licentiate in Arts shall reside at their respective College during at least the first two terms of each Session.

After having completed the above curriculum, Candidates for the Diploma shall pass a University Examination in Greek, Latin, or a Modern Continental Language; in Mathematical Science; and in two other subjects selected from the annexed list, viz.:—

The Mathematical Sciences.
The Experimental Sciences.
The Natural Sciences.
Geometrical Drawing.
Mensuration, Levelling, and Mapping.
Anatomy and Physiology.
English Language and Literature.
The Modern Continental Languages.
Greek.
Latin.
Logic.
Metaphysics.
History.
Political Economy.

English Composition will form a part of all University Examinations.

Licentiates in Arts who may desire to proceed to the Degree of Bachelor in Arts, may enter directly on the second Session in the Course for this Degree, provided they attend in it, instead of the usual curriculum, all the Courses prescribed for the first two years which they shall not have already attended in the curriculum for the Diploma of Licentiate.

UNIVERSITY PRIZES.

University Exhibitions in the Faculty of Arts.

Three Exhibitions of £20 a year for three years, three Exhibitions of £15 a year for three years, and two Exhibitions of £10 a year for three years, will be competed for annually in the Faculty of Arts. The three £20 Exhibitions will be awarded to the Candidates who stand foremost in order of merit from each College, at the first University Examination in Arts; and the three £15 Exhibitions to the Candidates who stand second in order of merit from each College: provided that their names appear in the First Class of the Division List at that Examination. Of the two £10 Exhibitions, one will be awarded to the best answerer in Mathematical Science, and the other to the best answerer in the Ancient Classics, at the first University Examination. The £10 Exhibitions are open to the competition of Candidates from all the Colleges, and may be held along with one of the larger Exhibitions.

Each Candidate will be deemed a Student of that College in which he shall have attended the Lectures of the second Session; and no Student will be admitted to the competition who shall have allowed more than one academic year to intervene between the time that he entered upon the studies of the second Session and the time of competition.

The first instalment of each Exhibition will be paid at the time of competition; the second when the Exhibitioner takes the Degree of B.A. in the Queen's University, provided he graduate with honors, and within two academic years; and the third when he takes the Degree of M.A. in the Queen's University, provided he obtain it within three academic years from the time of competition.

* Note.—Degrees in Arts, conferred by the Queen's University in Ireland, are recognised by the University of Durham, by St. Bee's College, Whitehaven, and by St. Aidan's College, Birkenhead, in the case of Theological Students preparing for Holy Orders in the Established Church.

University Prizes in Composition, open to the Competition of Graduates and Undergraduates.

Two Prizes for English Prose Composition, one of £10 worth of Books, and the other of £5 worth of Books, have been founded, and are open to the competition of all members of the University who shall not have been graduates for more than three years at the time of competition, and who shall not have already twice obtained one or other of these Prizes.

University Prizes in Composition, open to the Competition of all Undergraduates.

Two Prizes in Composition, one for English Prose, the other for Greek or Latin Prose, and each consisting of £3 worth of Books, have been founded, and are open to the competition of all undergraduates, provided that neither the English nor the Classical Prize be awarded oftener than twice to any Student.

NOTE.—One of the Regulations on page 14 provides that "Third-year's Students in Arts may substitute subsequans one or two courses of Honor Lectures for a like number of the courses set down upon page 13 for study in the Third Session.

Under this Regulation Candidates are at liberty to substitute one or two of the following courses for a like number of the courses set down on page 14 for study in the Third Session, viz. :—

Greek,	Geology and Physical Geography,
Latin,	French,
Pure Mathematics,	German,
Mathematical Physics,	Italian,
Experimental Physics,	Logic;

provided that the Rules of the College Council admit of their making this substitution, and provided further that the course substituted are courses specially preparing Students for one or more of the Honor Examinations for the degree of B.A.

Candidates are allowed under the same conditions to attend Honor Courses on two of the subjects, Metaphysics, History, and Political Economy, as two of the courses of the Third Session. Candidates who avail themselves of this permission are at liberty to attend the third of these subjects as another course of the Third Session.

A similar interpretation applies to the courses of Botany and Zoology, which will count as two courses of the Third Session, provided that one of them be an Honor Course, attended under the conditions stated above.

APPENDIX III.

DEGREE IN ENGINEERING.

Each Candidate for the Degree in Civil Engineering is required:—

1. To have been admitted a Matriculated Student of the Queen's University in the Department of Civil Engineering.
2. To have studied in the College of the Queen's University the Course herein prescribed.
3. To have passed the University Examinations herein prescribed.

The Course for the Degree in Civil Engineering shall usually extend over Three Sessions, and shall comprise attendance on the following curriculum :—

FIRST SESSION.

Mathematics (First Course).
Chemistry.
Modern Languages.
Geometrical Drawing.
Office Work.
Mineralogy, Geology, and Physical Geography.

SECOND SESSION.

Mathematics (Second Course).
Experimental Physics.
Civil Engineering.
Office Work.
Field Work.

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THIRD SESSION.

Natural Philosophy, applied.
Mathematical Physics.
Civil and Mechanical Engineering
Office Work.
Field Work.
Engineering Excursions.

Attendance on these Courses shall in all cases be understood to include passing such Examinations as may be appointed by the College Council, as well as the catechetical parts of the Courses of the Lecture.

Engineering Students shall reside at their respective Colleges during at least the first two Terms of each Session, and can be exempted from residence during the third Term also, only by a special grace of the College Council.

The study of the Engineering Curriculum may be extended over more than three Sessions, on the recommendation of the College Council, and under such regulations as the Council shall impose. Some relaxation of the order in which the subjects shall be studied will also be admitted, on the recommendation of the Council.

Candidates will, on the special recommendation of the College Council, be admitted to the Degree after two years' residence instead of three, if their previous acquaintance with a sufficient group of the subjects above set down for study in the First and Second Session is deemed by the Council satisfactory. In such case the Certificate of the Council will be accepted in lieu of attendances upon these Courses, but will not exempt Candidates from the University Examinations in them.

In order to obtain this Certificate, Students must have attended previously at least one Session in Arts, or one year in an Engineer's office. On making application to the Council, such Students will be allowed to present themselves, at the time of Matriculation, for examination in the subjects of any four of the eight Courses of Lectures of the first two years. On passing this Examination, they will be allowed to take rank at once as Students of the second year, and will then be required to attend those other four Courses of Lectures only, in the subjects of which they have not passed; but they will not be eligible for the Scholarship of that year.

The application to be admitted to this Examination must be lodged with the Registrar before the first day of the Session, and must state what are the four subjects in which the Students propose to offer themselves for Examination, and must be accompanied by a Certificate of the required attendance of one or more years in Arts or an Engineer's Office.

On passing the Sessional Examinations in the subjects of these four Courses of Lectures which they shall have attended as Students of the second year, they will be promoted to the rank of Students of the third year; and, on completing the regular Course of that year, will be furnished with the Certificate required by the Senate of the University.

The University Examinations shall extend to all the subjects of the above Curriculum. French will, in all cases, be required.

Candidates must present themselves before the close of their Collegiate Course for Examination in the following subjects, viz.:—Mathematics (*First Course*); Experimental Physics; Modern Languages; Geometrical Drawing (including Orthographic projection, Isometric projection, Descriptive Geometry, and Linear Perspective); Mathematics (*Second Course*); Mensuration, Levelling, and Mapping.

The final Examination shall extend to all the subjects of the Engineering Course, in which the Candidate shall not have previously passed. English Composition will form a part of each University Examination.

This Ordinance shall take effect from the first day of January, 1860 ; Students who shall have entered the Engineering Schools of the Colleges of Queen's University previously, may proceed either under the present Ordinance, or under that hitherto in force.

Exhibitions in the School of Engineering.

Two Exhibitions, one of £90 a year for two years, and the other of £15 a year for two years, will be competed for annually in the School of Engineering. These Exhibitions will be awarded at the first University Examination in

Engineering: the £20 Exhibition to the best answerer absolutely, in whichever *Appendices.* of the Colleges he may have been educated, and the £15 Exhibition to the Candidate who is first in order of merit of the competitors from the other two Colleges: provided that their names appear in the First Class of the Division List at that Examination.

Each Candidate will be deemed a Student of that College in which he shall have attended the Lectures of the second Session; and no Student will be admitted to the competition who shall have allowed more than a year to intervene between the time that he entered on the studies of the second year and the time of completion.

The first instalment of each Exhibition will be paid at the time of competition; the other when the Exhibitioner takes the Diploma in Engineering of the Queen's University, provided that he take honors with it, and obtain it within two academic years from the time of competition.

APPENDIX IV.

FACULTY OF MEDICINE.

DEGREES OF M.D. AND M.CH.*

Each Candidate for the Degree of Doctor in Medicine or Master in Surgery is required:—

1st—To have passed in one of the Colleges of the Queen's University the Entrance Examination in Arts, and to have been admitted a Matriculated Student of the University.

2nd—To have attended in one of the Queen's Colleges, Lectures on one Modern Continental Language for six months, and Lectures on Natural Philosophy for six months.

3rd—To have attended, in some one of the Queen's Colleges, at least two of the courses of Lectures marked with an asterisk. For the remainder of the courses, authenticated certificates will be received from the Professors or Lecturers in Universities, Colleges, or Schools, recognised by the Senate of the Queen's University in Ireland.

4th—To pass two University Examinations—the First University Examination, and the Degree Examination.

The Curriculum shall extend over at least four years, and shall be divided into periods of at least two years each.

Candidates are recommended to pass the Matriculation Examination prior to entering on the second period.

It is recommended that the first period shall comprise attendance on the following Courses of Medical Lectures:—

* Chemistry.
* Botany, with Herborizations for practical study, and Zoology.
* Anatomy and Physiology.
* Practical Anatomy.
* Materia Medica and Pharmacy.

And that the second period shall comprise attendance on the following Courses of Medical Lectures:—

Anatomy and Physiology (Second Course).
Practical Anatomy (Second Course).
* Theory and Practice of Surgery.
* Midwifery.
* Theory and Practice of Medicine.
* Medical Jurisprudence.

In addition to the above Courses of Lectures, Candidates shall have attended during either the first or second period—

A Modern Continental Language (in one of the Colleges of the University).
Experimental Physics (in one of the Colleges of the University).

* The regulations under which degrees in Surgery will be conferred on Candidates who graduated in Medicine before the year 1865, may be learned on application to the Secretary of the Queen's University.

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Also, during the first period—

Practical Chemistry (in a recognised Laboratory).

Medico-Chirurgical Hospital (recognised by the Senate) containing at least sixty beds, together with the Clinical Lectures therein delivered, at least Two each Week—a Winter Session of Six Months.

And during the second period—

Practical Midwifery, at a recognised Midwifery Hospital, with the Clinical Lectures therein delivered—for a period of Three Months, in an Hospital containing not less than Thirty beds; or six Months, in an Hospital containing not less than Fifteen beds.

Medico-Chirurgical Hospital (recognised by the Senate) containing at least sixty beds, together with the Clinical Lectures therein delivered—Eighteen Months; including either three Winter Sessions of Six Months each, or two Winter Sessions of Six Months each, and two Summer Sessions of Three Months each.

Medical Examinations are held in June, and in September and October.

The June Examinations are Pass Examinations, and commence on the Tuesday following the Second Saturday in June.

The Honor Examinations commence on the last Tuesday in September, and are followed by Pass Examinations.

Each Candidate for Examination in June must forward to the Secretary, on or before the first of June, notice of his intention to offer himself as a Candidate, along with his Certificates; and each Candidate for Examination in September or October must forward similar notice, along with his certificates.

Exhibitions in the Faculty of Medicine.

Two exhibitions, one consisting of two instalments of £20 each, and the other of two instalments of £15 each, will be competed for annually in the Faculty of Medicine. These exhibitions will be awarded for proficiency in the non-professional part of the first University Examination in Medicine: the £20 exhibition to the best answerer absolutely, in whatever of the Colleges he may have been educated; and the £15 exhibition to the candidate who is first in order of merit of the competitors from the other two colleges; provided that their names appear in the First Class of the Division List at that examination.

Each Candidate will be deemed a student of that College in which he shall have attended the Lectures of the second session; and no student will be admitted to the competition who shall have allowed more than a year to intervene between the time that he entered on the studies of the second year and the time of competition.

The exhibitions in Medicine will be paid in two equal instalments: one at the time of competition; the other when the exhibitioner takes the Degree of M.D. in the Queen's University, provided that he graduate with honors, and within three academic years from the time of competition.

Prize in Composition, limited to the Competition of Undergraduates in Medicine.

A prize of £5 worth of books has been founded, for a thesis on a subject to be prescribed, and is limited to the competition of the Undergraduates in Medicine who shall not have already twice received the prize.

The subjects on which the competitors for composition prizes are to write, will be announced on or before the first of June in each year; the compositions, with fictitious signatures, are to be sent in to the Secretary of the University, on or before the first of the following September, and the successful competitors will be declared at the next Public Meeting of the University.

Hospital Attendance.—Clinical Lectures on Medicine and Surgery are delivered at the North and South Infirmaries, by the Physicians and Surgeons of those Institutions.

	£	s.	d.
Fee for twelve months,	8	8	0
Fee for six months,	5	5	0
Practical Pharmacy at the same Infirmaries—			
Fee for three months,	3	3	0
Clinical Midwifery at the Lying-in Hospital, with Practical Attendance upon Thirty Midwifery cases—			
Fee for six months,	3	3	0

Further information may be had from the Medical Officers at the Infirmaries.

APPENDIX V.

REGULATIONS AS TO LAW STUDENTS AND ATTORNEYS' APPRENTICES.

With regard to the admission of Students to the Degree of *Barrister-at-Law* (King's Inns, Dublin), the following Rules were made in Michaelmas Term, 1865:—

KEEPING TERMS.—Every Student, if a Graduate of any of the said Universities (Dublin, Oxford, Cambridge, London, or the *Queen's University in Ireland*), is required to keep only Six Terms' Commons in the Dining Hall of the King's Inns, and also Six Terms' Commons in one of the Inns of Court in London.

LECTURES.—Every Student electing to attend Lectures, if a Graduate of the University of Dublin, Oxford, Cambridge, Durham, London, or the *Queen's University in Ireland*, shall be eligible to be called to the Bar on producing Certificates of having attended, at least, two complete Courses of Lectures—One complete Course of Lectures of any two, at his option, of the Four Law Professors, namely, the Law Professors of the University of Dublin, and those of the King's Inns, and *at least five-sixths of the Lectures of each Session or University Term*; or, *if a Graduate in Arts of the Queen's University in Ireland*, shall have the option of producing Certificates of having attended *at least*, two complete Courses, of Lectures of *each of the two Law Professors of any College of the Queen's University*, comprising not less than thirty-six Lectures, and *at least five-sixths* of the Lectures of each Course, and of having passed the Examinations, in the College to which he belongs, on the subjects of the aforesaid two Courses of Lectures, provided that the Curriculum prescribed by the said two Courses of Lectures shall embrace all that is contained in the Course now prescribed by the Professors of the King's Inns, or as the same may be from time to time varied by any rules of the Benchers.

Every Student electing to attend Lectures, who shall not be *a Graduate* of one of the said Universities, shall be eligible to be called to the Bar on producing Certificates of having attended four Courses of Lectures, viz.:—One Course of the Lectures of each of the said four Professors, and, *at least*, five-sixths of the Lectures of each Session, or University Term, in such manner, however, that every such Student shall be engaged not less than three years in the study of the Law in Ireland, exclusive of the two years necessary for keeping Terms in England; in every one of which three years, one complete Course of Lectures must be kept; any Student who shall produce Certificates of having attended, *during three years*, the Courses of Lectures delivered by the Professors of English Law and of Jurisprudence, in *one of the Colleges of the Queen's University*, and of having passed the General Examinations in such College on the subjects so Lectured on, shall be deemed entitled to such and the same privileges, in respect to being called to the Bar, as if he had actually attended One Course of the Lectures of each of the Law Professors of the University of Dublin, and had been engaged for two years in such attendance.

With regard to APPRENTICES to the Profession of ATTORNEY AND SOLICITOR.

It is enacted by the Attorneys and Solicitors Act (Ireland) 1866, 29 and 30 Vict., c. 84), as follows: Any person having taken the degree of Bachelor of Arts, or Bachelor of Laws, in the University of Oxford, Cambridge, Dublin, Durham, or London, *or in the Queen's University in Ireland*, or the degree of Bachelor of Arts, Master of Arts, Bachelor of Laws, or Doctor of Laws, in any of the Universities of Scotland, none of such degrees being honorary degrees, and who at any time after having taken such degree, and either before or after the passing of the Act, has been bound by and has duly served under Indentures of Apprenticeship to a practising Attorney or Solicitor for the term of three years, and has been examined and sworn in the manner in the Act mentioned, and in accordance with the practice of the Courts of Chancery or Superior Courts of Law in Ireland, may be admitted and enrolled and registered as an Attorney or Solicitor. (Sect. 7.)

As to *Lectures*, it is provided that every person who, as a Matriculated or a Non-Matriculated Student of the University of Dublin, or *of any of the Queen's Colleges in Ireland*, shall have attended or shall attend any prescribed Lectures, and shall have passed or shall pass any prescribed examinations of the Professors of the Faculty of Law, in the said University of Dublin, or *in any of the said Queen's Colleges in Ireland*, for a period of two Collegiate years, and who shall have duly served as an Apprentice, under indentures, for the term of *four* years, in like manner as by the Act is provided respecting the service for the term of *five* years, shall at any time after the expiration of five years from the commencement of such attendance on Lectures, or of such period of service, which shall first happen,

Appendix I.

General Regulations of College, &c.

be qualified to be sworn and to be admitted as an Attorney or Solicitor respectively, according to the nature of his service, of the several and respective Superior Courts of Law or Equity, to fully and effectually to all intents and purposes as any person having been bound and having served *five* years, is qualified to be sworn, and to be admitted or enrolled, and registered as Attorney or Solicitor under the Act. (Sect. 9.)

APPENDIX VI.

EXAMINATIONS FOR THE CIVIL SERVICE OF INDIA.

Regulations for the Open Competition of 1871.

N.B.—The Regulations are liable to be altered in future years.

1. On Tuesday, March 28, 1871, and following days, an Examination of Candidates will be held in London. At this Examination no fewer than will be selected, if so many shall be found duly qualified. Of these, will be selected for the Presidency of Bengal, for the Upper Provinces, and for the Lower Provinces,† for that of Madras, and for that of Bombay.*—Notice will hereafter be given of the days and place of Examination.

2. Any person desirous of competing at this Examination, must produce to the Civil Service Commissioners, before the 1st of February, 1871, evidence showing:

(*a*) That he is a natural-born subject of Her Majesty.

(*b*) That his age, on the 1st March, 1871, will be above seventeen years and under twenty-one years. [*N.B.*—In the case of *Natives of India* this must be certified by the Government of India, or of the Presidency or Province in which the Candidate may have resided.

(*c*) That he has no disease, constitutional affection, or bodily infirmity unfitting him, or likely to unfit him, for the Civil Service of India.†

(*d*) That he is of good moral character ;

and must also, before the 1st February, 1871, pay to the said Commissioners such fee as the Secretary of State for India may prescribe.‡

3. Should the evidence upon the above points be *primâ facie* satisfactory to the Civil Service Commissioners, the Candidate will, upon the payment of the prescribed fee, be admitted to the Examination. The Commissioners may, however, in their discretion, at any time prior to the grant of the Certificate of Qualification hereinafter referred to, institute such further inquiries as they may deem necessary; and if the result of such inquiries, in the case of any Candidate, should be unsatisfactory to them in any of the above respects, he will be ineligible for admission to the Civil Service of India, and if already selected, will be removed from the position of a Probationer.

4. The Examination will take place only in the following branches of knowledge.

	Marks.
English Composition.	500
History of England—including that of the Laws and Constitution.	500
English Language and Literature.	500
Language, Literature, and History of Greece,	750
„ „ „ „ Rome,	750
„ „ „ „ France,	375
„ „ „ „ Germany,	375
„ „ „ „ Italy,	375
Mathematics, pure and mixed,	1,250
Natural Science—that is (1) Chemistry, including Heat ; (2) Electricity and Magnetism ; (3) Geology and Mineralogy ; (4) Zoology ; (5) Botany,	1,250

. The total (1,000) marks may be taken by adequate proficiency in any two or more of the five branches of Science included under this head.

* The number of appointments to be made, and the number in each Presidency, &c., will be announced hereafter.

† Evidence of health and character must bear date not earlier than the 1st January, 1871.

‡ The Fee for this Examination will be £5.

	Marks.
Moral Science—that is, Logic, Mental and Moral	
Philosophy, ...	500
Sanscrit Language and Literature, ...	500
Arabic Language and Literature, ...	500

Candidates are at liberty to name, before February 1, 1871, any or all of these branches of knowledge. No subjects are *obligatory.*

5. The merit of the persons examined will be estimated by marks; and the number set opposite to each branch in the preceding regulation denotes the greatest number of marks that can be obtained in respect of it.

6. No candidate will be allowed any marks in respect of any subject of examination, unless he shall be considered to possess a *competent knowledge* of that subject.*

7. The Examination will be conducted by means of printed questions and written answers, and by *vivâ voce* Examination, as may be deemed necessary.

8. The marks obtained by each candidate, in respect of each of the subjects in which he shall have been examined, will be added up, and the names of the candidates who shall have obtained a greater aggregate number of marks than any of the remaining candidates will be set forth in order of merit, and such candidates shall be deemed to be selected candidates for the Civil Service of India, provided they appear to be in other respects duly qualified; and shall be permitted to choose,† according to the order in which they stand, as long as a choice remains, the Presidency (and in Bengal, the division of the Presidency) to which they shall be appointed. Should any of the selected candidates become disqualified, the Secretary of State for India will determine whether the vacancy thus created shall be filled up or not. In the former case, the candidate next in order of merit and in other respects duly qualified, shall be deemed to be a selected candidate.

9. Selected candidates before proceeding to India, will be on probation for two years, during which time they will be examined periodically, with a view of testing their progress in the following subjects :—

		Marks.
1. Oriental Languages:		
Sanscrit, ...		400
Vernacular§ Languages of India (each), .		400
2. The History and Geography of India, . . .		350
3. Law, ...		1,350
4. Political Economy, ...		350

In these Examinations, as in the open competition, the merit of the candidates examined will be estimated by marks, and the number set opposite to each subject denotes the greatest number of marks that can be obtained in respect of it at any one Examination. The Examination will be conducted by means of printed questions and written answers, and by *vivâ voce* Examination, as may be deemed necessary. The last of these Examinations will be held at the close of the second year of probation, and will be called the "Final Examination," at which it will be decided whether a selected candidate is qualified for the Civil Service of India.

10. Any candidate who, at any of the periodical Examinations, shall appear to have wilfully neglected his studies, or to be physically incapacitated for pursuing the prescribed course of training, will be liable to have his name removed from the list of selected candidates.

11. No candidate will be permitted to proceed to India before he shall have passed the Final Examination, and received a certificate of qualification from the Civil Service Commissioners, or after he shall have attained the age of twenty-four years.

12. The selected candidates who, at the Final Examination, shall be found to have a competent knowledge of the subjects specified in Regulation 9, and who

* " Nothing can be further from our wish than to hold out premiums for knowledge of wide surface and of small depth. *We are of opinion that a candidate ought to be allowed no credit at all for taking up a subject in which he is a mere smatterer.*"—Report of Committee of 1854. A deduction of marks will be made under each subject, including *Mathematics.*

† This right must be exercised immediately after the result of the examination is announced, on such day as may be fixed by the Civil Service Commissioners.

‡ Full instructions as to the course of study to be pursued will be issued to the successful candidates as soon as practicable after the result of the open competition is declared.

§ Including, besides the languages prescribed for the several Presidencies, such other Languages as may, with the approval of the Commissioners, be taken up as subjects of examination.

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shall have satisfied the Civil Service Commissioners of their eligibility in respect of age, health, and character, shall be certified by the said Commissioners to be entitled to be appointed to the Civil Service of India, provided they shall comply with the regulations in force, at the time, for that Service.

13. The seniority in the Civil Service of India of the selected candidates shall be determined according to the order in which they stand on the list resulting from the Final Examination.

14. Applications from persons desirous to be admitted as candidates are to be addressed to the Secretary to the Civil Service Commissioners, London, S.W., from whom the proper form for the purpose may be obtained.

July 23rd, 1870.

NOTE.—(1.) The Secretary of State for India in Council has authorized the Civil Service Commissioners to state that it is his intention to allow the sum of £50 after each of the three first half years of probation, and £100 after the last half year, to each selected candidate who shall have passed the reviewed Examinations to the satisfaction of the Commissioners, and shall have complied with such rules as may be laid down for the guidance of selected candidates.

(2.) All selected candidates, after having passed the second periodical Examination, is attend at the India Office for the purpose of entering into an agreement binding themselves, amongst other things to refund in certain cases the amount of their allowance in the event of their failing to proceed to India.

(3.) After passing the Final Examination, each candidate will be required to attend again at the India Office, with the view of entering into covenants and giving a bond for £1,000, jointly with two sureties, for the due fulfilment of the same. The stamps payable in these documents amount to £5 10s.

(4.) Candidates rejected at the Final Examination of 1873 will in no case be allowed to present themselves for re-examination.

APPENDIX VII.

EAST INDIA PUBLIC WORKS DEPARTMENT.

Extracts from Prospectus of Indian Engineering College.

1. The Department is supplied from the following sources :—
   (1) Officers of Royal Engineers.
   (2) Other Officers of the Indian Army who have passed the qualifying Examination.
   (3) Passed Students of Government Civil Engineering Colleges in England and India.
   (4) Civil Engineers of approved qualification, appointed direct by the Secretary of State, or Government of India.
   (5) Deserving Subordinates promoted.

2. Admission to the College will be obtained by competitive examination, to which all British-born subjects between the ages of 17 and 21 years on the 1st day of the autumn term,* and by passing the examination, who can produce satisfactory testimonials of good character, will be eligible. If this evidence should be *primâ facie* satisfactory, applicants will be allowed to compete ; ,but further evidence will, if necessary, be required from the successful candidates. Intending competitors will be required to furnish satisfactory evidence on this point to the Civil Service Commissioners, not later than the 20th May.†

3. The competitive examination, which will also form the preliminary test for those candidates who, under the conditions stated in paragraph 6, qualify for direct admission to the public service, without going through the College course, will commence on Tuesday, June 13th, and will be conducted under the

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* The Autumn term will commence this year on the 5th of August.

† The beneficial forms of application, with instructions for filling them up and as to the nature of the evidence required, may be obtained from the Secretary, Civil Service Commissioners, Cannon Row, Westminster, S.W.

orders of the Civil Service Commissioners, and will embrace the following subjects :—

			Marks assigned.
(1) English Composition, ...	500 }	1,000	
,, History and Language, .	500 }		
(2) Mathematics, Pure and Mixed, ...		2,000	
(3) Latin, ...		1,000	
(4) Greek, ...		1,000	
(5) French, ...		750	
(6) German, ...		750	
(7) Natural and Experimental Sciences, limited to not more than three of the four following Branches, viz. :—			
(1) Chemistry ; (2) Heat and Light ; (3) Electricity and Magnetism ; and (4) Geology and Physical Geography,	}	2,000	
(8) Mechanical (Geometrical) Drawing, including perspective, .		500	
(9) Freehand (Figure and Landscape) Drawing, . . .		500	

4. Of these subjects two will be compulsory, viz.:—

(1) English Composition, to the extent of a Candidate being able to write grammatically, and with correct spelling.

(2) The following Branches of Mathematics, viz.—Arithmetic, Algebra, Geometry (Books 1, 2, 3, 4, and 6, of Euclid), Mensuration and Plane Trigonometry, in which the Candidate will be required to obtain not less than one-fourth of the aggregate marks assigned to them.

5. A minimum of one-fifth of the total number of marks allowed for each subject (except mathematics) will be deducted from all marks gained by a candidate in it at the competitive examination.

6. The fifty candidates who, qualifying in the obligatory subjects, obtain the highest aggregate number of marks, will either be admitted to the College, or such of them as shall have already completed their professional studies, and shall have passed not less than one year as pupil to a civil or mechanical engineer in actual practice, may apply to be at once examined in the subjects* comprising the final qualifying standard for the engineer service. This examination will embrace, in addition to approved theoretical subjects, the execution of a certain quantity of drawing, estimating, surveying, &c., which will occupy some weeks in performance, and is well calculated to test, but by independent Examiners. A candidate who undergoes this examination successfully will thereon be at once appointed to the public service as an Assistant Engineer, Second Grade, and the College fee for one term which had to be paid in advance will be remitted. Should the candidate, however, not have served a pupilage as above, he will be placed with a Civil or Mechanical Engineer, selected with the approval of the Secretary of State, to go through a practical course, at his own expense, on the satisfactory completion of which he will receive his appointment.

7. Similarly, students who, although not coming up to the full standard of qualification, may be reported by the Examiners to be sufficiently advanced in their professional studies to enter at once on the second year's course, will be placed in the second year's class of the College accordingly.

8. An annual charge of £150 will be made for each student, in three payments of £50 per term, which must be paid in advance to the Accountant-General, India Office.

10. But in the case of a student whose parents or guardians may represent their inability to defray the whole of this charge, payment of a part not exceeding £20 per term or £60 per annum can be deferred, and allowed for deductions from the student's salary during the three first years after his admission to the Government service. In such case he will be required to engage beforehand his own consent to the arrangement, and security must be given for payment of the deferred portions of the College fees, in the event of the student failing to enter the Government service. The benefit from of application for admission to the benefit of this rule will be obtainable, after July next, at the Public Works Department of the India Office.

Courses of Lectures on the subjects contained in the above list for the Competitive Examination for entrance to the College, with the exception of No. 9, are given at the Queen's College, Cork. No detailed information has yet been received with regard to the Examination which must be passed by Candidates

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desiring to avail themselves of the provisions of paragraphs 6 and 7; but it is anticipated that Candidates who have passed through the Course prescribed for Students in the Engineering School of the Queen's College, and have fully profited by the instruction there given, will be found in a position to avail themselves of these provisions, with the exception of that referring to the practical year.

The Professor of Civil Engineering will be happy to give any further information which he may have on this subject to Students desirous of obtaining it.

Appendix B.

APPENDIX B.

Selection of Examination Papers used at the Sessional Examinations.

SELECTION OF EXAMINATION PAPERS USED AT THE SESSIONAL EXAMINATIONS FOR THE SESSION OF 1870–71.

JUNIOR GREEK.

Translate :—

XENOPHON—*Anab.* Book V., c. iv., 16, 17, 18.

Ἔπον/το δ᾽ αὐτοῖς καὶ τῶν Ἑλλήνων τινές, οἳ ταχθέντες ὑπὸ τῶν στρατηγῶν ἀλλὰ ἁρπαγῆς ἕνεκεν. οἱ δὲ πολέμιοι, προσιόντων, τέως μὲν ἡσύχαζον· ἐπεὶ δ᾽ ἐγγὺς ἐγένοντο τοῦ χωρίου, ἐκδραμόντες τρέπονται αὐτούς, καὶ ἀπέκτειναν συχνοὺς τῶν βαρβάρων καὶ τῶν ξυναναβάντων Ἑλλήνων τινάς, καὶ ἐδίωκον μέχρι οὗ εἶδον τοὺς Ἕλληνας βοηθοῦντας· εἶτα δὲ ἀποτραπόμενοι ᾤχοντο, καὶ ἀποτραμόντες τὰς κεφαλὰς τῶν νεκρῶν ἐπεδείκνυσαν τοῖς τε Ἕλλησι καὶ τοῖς ἑαυτῶν πολεμίοις, καὶ ἅμα ἐχόρευον νόμῳ τινὶ ᾄδοντες· οἱ δὲ Ἕλληνες μάλα ἤχθοντο ὅτι τούς τε πολεμίους ἐπεποιήκεσαν θρασυτέρους καὶ ὅτι οἱ ἐξελθόντες Ἕλληνες σὺν αὐτοῖς ἐπεφεύγεσαν μάλα ὄντες συχνοί· ὃ οὔπω πρόσθεν ἐπεποιήκεσαν ἐν τῇ στρατιᾷ.

1. Parse fully :—ἔπον; το, ἐκδραμόντες, ξυναναβάντων, ἀποτραπόμενοι, ἐπεφεύγεσαν.

2. Explain the construction of ἁρπαγῆς ἕνεκεν.

3. Distinguish between χωρα and χωρίον.

4. Distinguish between βοηθεῖν τινί, βοηθεῖν ἐπί τινά, and βοηθεῖν παρά τινά.

Translate into Greek :—

(a.) The father of my friend has a pain in both his feet.

(b.) I was pleased with the prudence of the boy.

(c.) The men of former days often treated their slaves ill.

(d.) He asked whether my father was angry.

(e.) What shall I do with this boy?

(f.) If my friend's son had been present, you would not have escaped with impunity.

(g.) If you were to practise temperance, you would not suffer pain.

(h.) The general of the Lacedaemonians invaded Attica, that he might lay waste the country.

(i.) We ought to confer benefits, when we can, upon others.

(k.) Socrates was tried for impiety.

* N.B.—Additional credit will be given for *correct* accentuation.

Translate :—

EURIPIDES—*Phœnissæ*, vv. 180–199.

AN. Ἰώ,
Νέμεσι καὶ Διὸς βαρύβρομοι βρονταί,
κεραυνῶν τε πῦρ αἰθαλόεν, σύ τοι
μεγαλαγορίαν ὑπεράνορα κοιμίζεις.
ὅδ᾽ ἐστίν, αἰχμαλωτίδας
ὃς Θηβαίαις Μυκηνηίσιν
Λερναίᾳ τε δώσει τραίνῃ,
Ποσειδωνίοις τ᾽ Ἀμυμωνίοις
ὕδασι, δουλείαν περιβαλών·
μήποτε μήποτε τάνδ᾽, ὦ πότνια,
χρυσεοβόστρυχον ὦ Διὸς ἔρνος
Ἄρτεμι, δουλοσύναν τλαίην.

ΠΑΙ. ὦ τέκνον, εἴσβα δόμα· καὶ κατὰ στέγας
ἐν παρθενῶσι μίμνε σοῖς, ἐπεὶ πόθου
ἐς τέρψιν ἦλθες ὧν ἔχρῃζες εἰσιδεῖν.
ὄχλος γὰρ, ὡς ταραχαῖσι εἰσῆλθεν πόλιν,
χωρεῖ γυναικῶν πρὸς δόμους τυραννικούς.
φιλόψογον γὰρ χρῆμα θηλειῶν ἔφυ,
σμικράς τ᾽ ἀφορμὰς ἢν λάβωσι τῶν λόγων,
πλείους ἐπεισφέρουσιν· ἡδονή δέ τις
γυναιξὶ μηδὲν ὑγιὲς ἀλλήλας λέγειν.

1. Point out the Doric forms in the extract, and give their equivalents in the common dialect.

2. Derive μεγαλαγορίαν, ὑπεράνορα, αἰχμαλωτίδας, ἀφορμάς.

3. Explain the construction of ὧν ἐν ᾧ ἔχρῃζες εἰσιδεῖν.

4. Show that πότνια is not a feminine from πότνιος.

5. Explain the expression Λερναίᾳ τραίνῃ, and Ποσειδωνίοις τ᾽ Ἀμυμωνίοις ὕδασι.

6. Mark the scansion of the following lines, naming the feet and pointing out the principal cæsura in each :—

(a.) πολυδάκρυον ἐξέλυσε τοῦ δὲ λαβδάκιον

(b.) ἔθετο γαμεῖ δὲ Λαΐῳ μ᾽, ἐπεὶ δ᾽ ἄκμας

(c.) ἦν χρόνια λέκτρα τἀμ᾽ ἔχων ἐν δώμασιν.

7. Translate the last line of the extract with the reading ἀλλήλαις.

SECOND YEAR'S GREEK CLASS.

Translate :—

(A.) EURIPIDES—*Bacchæ*, vv. 1200–1221.

ΧΟ.	δείξον νυν, ὦ τάλαινα, σὸν νικηφόρον	
	ἅπασιν ἄγραν, ἣν φέρουσ᾽ ἐλήλυθας.	1200
ΑΓ.	ὦ καλλίπυργον ἄστυ Θηβαίας χθονὸς	
	ναίοντες, ἔλθεθ᾽ ὡς ἴδητε τήνδ᾽ ἄγραν,	
	Κάδμου θυγατέρες θηρὸς ἣν ἠγρεύσαμεν,	
	οὐκ ἀγκυλωτοῖς Θεσσαλῶν στοχάσμασιν,	1205
	οὐ δικτύοισιν, ἀλλὰ λευκοπήχεσι	
	χειρῶν ἀκμαῖσιν. εἶτα κομπάζειν χρεὼν	
	καὶ λογχοποιῶν ὄργανα κτᾶσθαι μάτην ;	

ἡμεῖς δὲ ταύτῃ χειρὶ τόνδε θ' εἱλομεν
χωρὶς τε θηροῦ ἄρθρα διεσφηρήσαμεν.   1210
τοῦ μοι πατὴρ ὁ πρέσβυς· ἔλθετο πέλας.
Πενθεὺς τ' ἐμὸς παῖς τοῦ 'στιν· αἱ εἴλομεν λαβὼν
πηγὰς πρὸς οἴκους κλιμάκων προσαμβάσεις,
ὡς σφηλώσῃ τριγλύφοις τόδε
λόντος, ὃν πάρεισι θηρσᾶσ' ἐγώ.   1215
ΚΛ. Πενθεῦς μοι φέροντες ἄθλον βάρος
Πενθέως, ἔπεσθε, πρόσπολοι, δόμων πάρος,
οὗ σῶμα μοχθῶν μυρίοις ζητήμασι
φέρω τόδ' εὑρὼν ἐν Κιθαιρῶνος πτυχαῖς
δυεσπάρακτον, κοὐδὲν ἐν ταὐτῷ πέδῳ   1220
λαβὼν, ἐν ὕλῃ κείμενον δυσευρέτῳ.

1. Distinguish between νικήφορος and νικηφόρος.
2. Explain the epithet ἀγκυλωτός.
3. Point out the peculiarity of construction in λειωντιθηχειν χειρῶν ἄκμαίσι.
4. Distinguish between the readings πλειτῶν and τηττῶν, v. 1213.
5. Derive and explain the term τρίγλυφος.   Explain the terms ὄτα and μέτοπαι.
6. What grammatical figure is exemplified in the expression κλιμάκων προσαμβάσεις?
7. Explain the term εἰρωνεία, and refer to any examples of it in the *Bacchæ.*

(B.)—HOMER—*Iliad*, Book xxiv., vv. 265–282.

Ὣς ἔφαθ', οἱ δ' ἄρα πατρὸς ὑποδδείσαντες ὁμοκλὴν   265
ἐκ μὲν ἀμαξαν ἄειραν ἐὔτροχον ἡμιονείην,
καλὴν, πρωτοπαγέα, πείρινθα δὲ δῆσαν ἐπ' αὐτῆς,
κὰδ δ' ἀπὸ πασσαλόφι ζυγὸν ᾕρεον ἡμιόνειον,
πύξινον, ὀμφαλόεν, εὖ οἰήκεσσιν ἀρηρός·
ἐκ δ' ἔφερον ζυγόδεσμον ἅμα ζυγῷ ἐννεάπηχυ.   270
καὶ τὸ μὲν εὖ κατέθηκαν ἐὔξέστῳ ἐπὶ ῥυμῷ,
πέζῃ ἐπὶ πρώτῃ, ἐπὶ δὲ κρίκον ἕστορι βάλλον,
τρὶς δ' ἑκάτερθεν ἔδησαν ἐπ' ὀμφαλόν, αὐτὰρ ἔπειτα
ἑξείης κατέδησαν, ὑπὸ γλωχῖνα δ' ἔκαμψαν.
ἐκ θαλάμου δὲ φέροντες ἐὔξέστης ἐπ' ἀπήνης   275
νήεον Ἑκτορέης κεφαλῆς ἀπερείσι' ἄποινα,
ζεῦξαν δ' ἡμιόνους κρατερώνυχας ἐντεσιεργούς,
τούς ῥά ποτε Πριάμῳ Μυσοὶ δόσαν ἀγλαὰ δῶρα.
ἵππους δὲ Πριάμῳ ὕπαγον ζυγόν, οὓς ὁ γεραιὸς
αὐτὸς ἔχων ἀτίταλλεν ἐὔξέστῃ ἐπὶ φάτνῃ.   280
τὼ μὲν ζευγνύσθην ἐν δώμασιν ὑψηλοῖσιν
κῆρυξ καὶ Πρίαμος, πυκινὰ φρεσὶ μήδε' ἔχοντες.

1. Explain such of the technical terms in the passage as you think may require explanation.
2. Notice any metrical peculiarity in v. 267.
3. Give Aristotle's definition of Unity of Plot.   Is it exemplified in the *Iliad*?

4. Explain the following grammatical forms :—πασσαλόφι, οἰήκεσσιν, *Appendix E.* ἀμφρὲς, ἡνιόφιν.

5. Distinguish between χέρηϊδυ and χέρηϊ, πρόχου and προχόη, πῖλος and πέλος, στεφάνη and στέφανος.

(C.)—HERODOTUS, Book i., c. 60.

Μετὰ δὲ οὐ πολλὸν χρόνον τωὐτὸ φρονήσαντες οἵ τε τοῦ Μεγακλέος στασιῶται καὶ οἱ τοῦ Λυκούργου ἐξελαύνουσί μιν. οὕτω μὲν Πεισίστρατος ἔσχε τὸ πρῶτον Ἀθήνας, καὶ τὴν τυραννίδα οὔκω κάρτα ἐρριζωμένην ἔχων ἀπέβαλε, οἱ δὲ ἐξελάσαντες Πεισίστρατον αὖτις ἐπ' ἀλλήλοισι ἐστασίασαν. περιελαυνόμενος δὲ τῇ στάσι ὁ Μεγακλέης ἐπεκηρυκεύετο Πεισιστράτῳ, εἰ βούλοιτό οἱ τὴν θυγατέρα ἔχειν γυναῖκα ἐπὶ τῇ τυραννίδι. ἐνδεξαμένου δὲ τὸν λόγον καὶ ὁμολογήσαντος ἐπὶ τούτοισι Πεισίστρατον μηχανῶνται δὴ ἐπὶ τῇ κατόδῳ πρῆγμα εὐηθέστατον, ὡς ἐγὼ εὑρίσκω, μακρῷ, ἐπεί γε ἀπεκρίθη ἐκ παλαιτέρου τοῦ βαρβάρου ἔθνεος τὸ Ἑλληνικόν, ἐὸν καὶ δεξιώτερον καὶ εὐηθείης ἠλιθίου ἀπηλλαγμένον μᾶλλον, εἰ καὶ τότε γε οὗτοι ἐν Ἀθηναίοισι τοῖσι πρώτοισι λεγομένοισι εἶναι Ἑλλήνων σοφίην μηχανῶνται τοιάδε. ἐν τῷ δήμῳ τῷ Παιανιέϊ ἦν γυνή, τῇ οὔνομα ἦν, μεγάθος μὲν τεσσέρων πηχέων ἀπολείπουσα τρεῖς δακτύλους καὶ ἄλλως εὐειδής. ταύτην τὴν γυναῖκα σκευάσαντες πανοπλίῃ, ἐς ἅρμα ἐσβιβάσαντες καὶ προδέξαντες σχῆμα, οἷόν τι ἔμελλε εὐπρεπέστατον φανέεσθαι ἔχουσα, ἤλαυνον ἐς τὸ ἄστυ, προδρόμους κήρυκας προπέμψαντες, οἳ τὰ ἐντεταλμένα ἠγόρευον ἐς τὸ ἄστυ ἀπικόμενοι, λέγοντες τοιάδε.

1. Distinguish between ἐπικηρυκεύεσθαι and ἐπικηρύσσειν.

2. Analyse the construction of the clause καὶ ὑμολογήσαντος ... τὸ ἔχουσα.

3. Give the common forms of ἐπιερωτέοντι, ἔσσα, κρέεσσι, ἐβεάλετο (give the mood, tense, and voice), and the Herodotean forms of ἰδέχοντο, χρόνου, γεταγμένου ἦμαι, ἐσίγνοντο, ἀνακλίνται.

4. Distinguish in meaning between χρᾶω and ἐγρέω.

5. When did Herodotus live, and who were the principal Greek writers before his time?

6. Draw a map of Asia Minor, showing the courses of the rivers Halys and Hæmus, and pointing out the positions of Sardes, Miletus, Ephesus, Smyrna, Phocæa, and of the islands Chios, Rhodus, and Samos.

Translate—

(A.)—THUCYDIDES, Book I., c. 32.

Δίκαιον, ὦ Ἀθηναῖοι, τοὺς μήτε εὐεργεσίας μεγάλης μήτε ξυμμαχίας προυφειλομένης ἥκοντας παρὰ τοὺς πέλας ἐπικουρίας, ὥσπερ καὶ ἡμεῖς νῦν, δεησομένους ἀναδιδάξαι πρῶτον, μάλιστα μὲν ὡς καὶ ξύμφορα δέονται, εἰ δὲ μή, ὅτι γε οὐκ ἐπιζήμια, ἔπειτα δὲ ὡς καὶ βέβαιον ἕξουσιν· εἰ δὲ τούτων μηδὲν σαφὲς καταστήσουσι, μὴ ὀργίζεσθαι ἢν ἀτυχῶσι. Κερκυραῖοι δὲ μετὰ τῆς ξυμμαχίας τῆς αἰτήσεως καὶ ταῦτα πιστεύοντες ἐχυρὰ ὑμῖν παρέξεσθαι ἀπέστειλαν ἡμᾶς. τετύχηκε δὲ τὸ αὐτὸ ἐπιτήδευμα πρός τε ὑμᾶς ἐς τὴν χρείαν ἡμῖν ἄλογον καὶ ἐς τὰ ἡμέτερα αὐτῶν ἐν τῷ παρόντι ἀξύμφορον. ξυμμαχοί τε γὰρ οὐδενός πω ἐν τῷ πρὸ τοῦ ἑκούσιοι γενόμενοι νῦν ἄλλων τοῦτο δεησόμενοι ἥκομεν, καὶ ἅμα ἐς τὸν παρόντα πόλεμον Κορινθίων

ἔριμοα δ᾽ αὐτὰ καθέσταμεν. καὶ περιϊσταται ἡ δοκοῦσα ὑμῶν πρότερον σω-
φροσύνη, τὸ μὴ ἐν ἀλλοτρίᾳ ξυμμαχίᾳ τῇ τοῦ πέλας γνώμῃ ἐγκινδυνεύειν,
νῦν ἀβουλία καὶ ἀσθένεια φαινομένη.

1. προσβεικομμένη, προσβεικομμένη.   Which form do you prefer, and why?
2. ἀναλελάξαι.   Explain the force of the preposition in this compound.
3. πρῶτον, μάλιστα μὲν, εἰ᾽ ἣ μή, ἔπειτα δέ.   Which are the corresponding expressions here?
4. ἐς καὶ τὴν ὑμῶν βέβαιον ἔξουσιν.   Of what two interpretations are these words susceptible, and which do you prefer?
5. Distinguish between the use of the preposition in πρὸς ὑμᾶς and in ἐς τὴν ἡμετέραν.
6. περιϊσταται φαινομένη.   What is there unusual in this construction?
7. How much of the Peloponnesian war does the work of Thucydides comprehend; and by whom has the remainder been supplied?

(B.)—Demosthenes—*Philipp.*, 2, σ´.

Ἣν μὲν οἶ᾽ δίκαιον, ὦ ἄνδρες ᾽Αθηναῖοι, τοὺς ἐνεγκόντας τὰς ὑποσχέσεις,
ἐφ᾽ αἷς ἐπείσθητε ποιήσασθαι τὴν εἰρήνην, ἐκαλεῖν᾽ οὔτε γὰρ ὑμεῖς ἄν ποτε
ἐπήμενα πρεσβεύειν, οὔθ᾽ ὑμεῖς οἶδ᾽ ὅτι ἐπαύσασθε πολεμοῦντες, εἰ
τοιαῦτα πράξειν ὑμῖν᾽ εἰρήνη θελείτων ᾤετε᾽ ἀλλ᾽ ἣν πολὺ τούτων
ἀφεστηκότα τὰ τότε λεγόμενα.   καὶ πάλιν γ᾽ ἑτέρους καλεῖν.   τίνας; τοὺς
ἐπ᾽ ἣν γενομένης ἤδη τῆς εἰρήνης ἐντὶ τῆς εἰρήνης ἐκεῖ πρεσβείας τὴν
ἐπὶ τοὺς ὅρκους, οἰσθόμενοι ἀναιξόμενοί με τῆς πόλιν, προσῆλεγον καὶ διαμε-
τηρήμην καὶ ὄκ οἷ᾽ προῖσθα Πύλας ὑπὸ Φωκέας, λέγοντας δὲ ἐγὼ μὲν
ὕδωρ πίνων εἰκότως δύστροπος καὶ δύσκολός εἰμ᾽ τις ἄνθρωπος, Φίλιππος δ᾽,
ἅπερ ἐξεύσθ᾽ ἂν ὑμῖς, ἣν παρέλθῃ, πράξει, καὶ Θεσπιὰς μὲν καὶ Πλαταιὰς
τειχιεῖ, Θηβαίους δὲ παύσει τῆς ὕβρεως, Χερρόνησον δὲ τοῖς αὑτοῦ τέλεσι
διορύξει, Εὔβοιαν δὲ καὶ τὸν ᾽Ωρωπὸν ἀντ᾽ ᾽Αμφιπόλεως ὑμῖν ἀποδώσει.

1. Who are meant by τοὺς ἐνεγκόντας and πάλιν γ᾽ ἑτέρους?
2. Point out anything remarkable in the construction of the sentence beginning τοὺς ἐπ᾽ ἣν, κ.τ.λ.
3. Explain the words ἣν παρέλθῃ.
4. Point out the difference between δύστροπος and δύσκολος; and derive the latter word.
5. Explain the historical allusions in the extract; and describe the positions of the places mentioned.

Translate into Greek :—

The Athenian commanders, in the meantime, consulted on the disaster which had befallen them, and on the want of vigour which at present on all accounts prevailed in their camp; seeing that they were both unsuccessful in their attempts, and that the soldiers were annoyed by their stay in the country.   For they were suffering with sickness from two different causes, both because this was the season of the year at which men are most liable to disease, and at the same time, too, because the position in which they were encamped was marshy and unfavourable; while they were also distressed because everything else appeared hopeless to them.   Demosthenes, then, was of opinion that they ought not to stay any longer; but, while the sea might yet be crossed, and while, as regarded forces, they might command the superiority with the squadron that had lately joined them, at any rate.

<div align="right">JOHN RYALL, Professor.</div>

Appendix B.

Selection of
Examination Papers
received at the
Sessional
Examina-
tion.

JUNIOR LATIN CLASS.

Translate :—

LIVY, xxiii., 48.

Quieta inde stativa fuere, ac retro etiam consul movit castra, ut se-
mentem Campani facerent; nec ante violavit agrum Campanum quam
iam altae in segetibus herbae pabulum praebere poterant. Id convexit
in Claudiana castra super Suessulam, iisque liberna aedificavit. M.
Claudio proconsuli imperavit, ut retento Nolae necessario ad tuendam
urbem praesidio ceteros milites dimitteret Romam, ne oneri sociis et
sumptui rei publicae essent. Et Tib. Gracchus a Cumis Luceriam in
Apulia legionem cum duxisset, M. Valerium inde praetorem Brundisium
cum eo quam Luceriae habuerat exercitu misit, tueríque oram agri Sal-
lentini et providere, quod ab Philippum bellumque Macedonicum attine-
ret, iussit.

VIRGIL—*Eclogues,* vii., 21–32.

   Corydon. Nymphae, noster amor, Libethrides, aut mihi carmen,
    Quale meo Codro, concedite-proxima Phoebi
    Versibus ille facit, aut, si non possumus omnes,
    Hic arguta sacra pendebit fistula pinu.
   Thyrsis. Pastores, hedera crescentem ornate poëtam,
    Arcades, invidia rumpantur ut illa Codro ;
    Aut, si ultra placitum laudarit, baccare frontem
    Cingite, ne vati noceat mala lingua futuro.
   Corydon. Saetosi caput hoc apri tibi, Delia, parvus
    Et ramosa Micon vivacis cornua cervi.
    Si proprium hoc fuerit, levi de marmore tota
    Puniceo stabis suras evincta cothurno.

1. Draw a map of Campania, and mark in it Neapolis, Cumae, Nola,
Capua, and Tifata.

2. What is the date of the battle of Cannae?

3. Give an account of Hannibal's life. Quote some passages from
Latin authors in which he is mentioned.

4. Contrast Virgil with the poets of the silver age of Latinity.

5. Notice some imitations of Theocritus in the *Eclogues.*

Translate into Latin :—

Meditate upon this daily, that you may leave life with an even mind.
   He told many falsehoods about his age, that he might appear younger
than he is.
   Do not learn many things, but useful things.
   He spoke much that he might be thought wise.
   Agricultural affairs are of such a kind that the winds and seasons
govern them.
   I know that my father does not learn many things, but much.

Translate into Latin Elegiacs :—

   But if you bid me speak of the subjugation of the giants by the
    fire of Jove,
   The burden will weaken me attempting.

   The path of Cocles testifies the cutting away of bridges.
   There is one to whom a raven granted to have a surname.

   My mouth is dull and the serving of tables excites loathings ;
   And I complain when the hour of hard food comes.

Selection of
Examina-
tion Papers
and the
Senior and
Sentiental
Examina-
tions.

THIRD YEAR'S LATIN CLASS.

Translate :—

MARTIAL, i., 55.

Vota tui breviter si vis cognoscere Marci,
Clautu militiæ, Fronto, togæque decus,
Hoc petit, esse sui nec magni ruris arator,
Sordidaque in parvis otia rebus amat.
Quisquam picta colit Spartani frigora saxi
Et matutinum portat ineptus Ave,
Cui licet exuviis nemoris rurisque beato
Ante focum plenas explicuisse plagas
Et piscem tremula salientem ducere seta
Flavaque de rubro promere mella cado ?
Pinguis inæquales onerat cui vilica mensas
Et sua non empto præparat ova cinis ?
Non amet hanc vitam quisquis me non amat, opto,
Vivat et urbanis albus in officiis.

TACITUS—*Histories*, iii., 13.

At Caecina, defectione classis vulgata, primores centurionum et paucos
militum, ceteris per subsidium manent, dispersis, secretum castrorum adfec-
tans in principia vocat. Dit Vespasiani virtutem viresque partim ex-
tollit : transfugisse classem, in arto commeatum, adversas Galliea Hispa-
niasque, nihil in urbe fidum ; atque omnia de Vitellio in deterius. Mox
incipientibus qui consul aderant, ceteros re nova attonitos in verba Ves-
pasiani adigit. Simul Vitellii imagines dereptae, et missi qui Antonio
nuntiarent. Sed ubi totis castris in fama prodito, recurrunt in principia
miles praescriptum Vespasiani nomen, proiectas Vitellii effigies aspexit,
vastum primo silentium, mox cuncta simul erumpunt. Huo occidisse
Germanici exercitus gloriam, ut sine proelio, sine vulnere victas manus
et capta traderent arma ? Quas enim ex diverso legiones ? Nempe vic-
tas. Et absesse unicum Othoniani exercitus robur, primanos quartade-
cumanosque, quos tamen iidem illis campis fuderint straverintque. Ut
armatorum milia, velut grex venalium, exuli Antonio donum darentur ?

1. Quote some passages from Martial in which he illustrates Juvenal.
2. Name the metres used by Martial, and give examples with the feet
   divided.
3. Mention and criticise some various readings in the first book of the
   Epigrams.
4. Explain the following words :—*rhonchus, quincunx, bardocucullus,
   tomaculum,* and *salarius.*
5. Write a summary of the third book of the *Histories* of Tacitus.
6. " Quos † militiae legionariae quanquam raptim ductos aequabant."
   Correct the text of this passage.
7. Give examples of poetical constructions from Tacitus.

SENIOR LATIN CLASS.

Translate :—

HORACE—*Epistles*, II., ii., 126–140.

Praetulerim scriptor delirus inersque videri,
Dum mea delectent mala me vel denique fallant,
Quam sapere et ringi. Fuit haud ignobilis Argis,
Qui se credebat miros audire tragoedos
In vacuo laetus sessor plausorque theatro,

Cetera qui vitae servaret munia recto
More, bonus sane vicinus, amabilis hospes,
Comis in uxorem, posset qui ignoscere servis
Et signo laeso non insanire lagenae,
Posset qui rupem et puteum vitare patentem :
Hic ubi cognatorum opibus curisque refictus
Expulit helleboro morbum bilemque meraco,
" Et rediti ad sese, Pol, me occidistis, amici,
Non servastis," ait, " cui sic extorta voluptas
Et demtus per vim mentis gratissimus error."

Cicero.—*De Officiis*, lib. II., 14.

Adde ductus aquarum, derivationes fluminum, agrorum irrigationes, moles oppositas fluctibus, portus manu factos, quae unde sine hominum opere habere possemus ? Ex quibus multisque aliis perspicuum est, qui chaeque utilitates ex rebus iis, quae sunt inanimae, percipiantur, eas non nullo modo sine hominum manu atque opere percipi potuisse. Qui denique ex bestiis fructus aut quae commoditas, nisi homines adiuvarent, percipi posset ? Nam et qui principes inveniendi fuerunt quem ex quaque belua usum habere possemus homines certe fuerunt nec hoc tempore sine hominum opere aut pascere eas aut domare aut tueri aut tempestivos fructus ex iis capere possemus, ab eisdemque et aut, quae nocent, interficiuntur et quae usui possunt esse capiuntur. Quid enumerem artium multitudinem, sine quibus vita omnino nulla esse potuisset ? Quid enim aegris subveniret, quae esset oblectatio valentium, qui victus aut cultus, nisi tam multae, nobis artes ministrarent ?

1. Give some account of Bion, Alcaeus, Ennius, and Livius Andronicus.

2. Derive the words *argilla*, *sequester*, *mancipio*, *tenetum*, *commodus*, and *invidia*.

3. Name the most celebrated artists who flourished in the age of Alexander the Great, and describe some of their works.

4. How may the date of Cicero's treatise *De Officiis* be ascertained ?

5. What are the Greek words corresponding to *officium*, *sapientia*, *prudentia*, and *probabile* ?

6. " Quinque rationibus propositis officii persequendi." Explain these words fully.

Translate into Latin :

Do not pester that excellent man with your threatening letters.
He never answered a single word to my very kindly-expressed letters.
I cannot but return some answer to your very acceptable letters.
Those wrong opinions of yours must be rooted-up out of your mind.
Is it the part of a Christian to spend all his life in making gain ?
You must strive to retain that great reputation of yours.
You must take care lest your so great reputation should be endangered.
No obstacle shall be placed by me in the way of accomplishing this
so great and difficult an object.

Translate into Latin Elegiacs :

Where you see these rocks on Bernard's mountain
Were the temples of Pennine Jove ;
An ancient place of hospitality and long memorable,
Now the altar of the true God is worship't.
For here formerly religion wished to dwell,
And rejoices to be present in a known spot.

B. LEWIS, *Professor.*

D

Appendix.
Selection of
Examina-
tion Papers
used at the
Senninal
Examina-
tions.

HISTORY.

1. What is History? What are the uses of historical study?
2. Discuss the sources of history; especially, Manuscripts, Inscriptions, Coins, and Medals.
3. Explain the uses of Bell's Chronological Tables, and Von Spruner's Geographical Maps.
4. Trace the rise, decline, and fall of the Feudal System.

5. Give a brief account of the States General, and the Parliaments in France.
6. Narrate the contest of Henry IV. for the crown of France.
7. Characterize the internal and foreign policy of Cardinal Richelieu.
8. What was the war of the Fronde?
9. What were the claims of Louis XIV. upon the Netherlands, and upon Spain?

10. Trace the course of English liberty, from Magna Charta to the Act of Settlement.
11. Sketch the character of Charles I.
12. Narrate the trial of the Earl of Strafford.
13. In the reign of Charles II. state what you know of the Cabal, the Triple Alliance, and the Popish Plot.
14. State the origin of the National Debt and the Bank of England.

ENGLISH LITERATURE.

1. State the difficulties in the application of Logical Analysis to Grammar.
2. Distinguish Simple and Compound Sentences.   How do you subdivide Compound Sentences?
3. What is a Verb?
4. Analyse these sentences :—
  (*a.*) You have condemned Lucius for taking bribes of the Sardians.
  (*b.*) Small herbs have grace,
      Ill weeds do thrive apace.
  (*c.*) Since Cassius first did whet me against Cæsar,
      I have not slept.
  (*d.*) That you have wronged me, appears in this.

5. Sketch the plot of Chaucer's Canterbury Tales.
6. Give the derivation of these words :—*corage, hostelrie, felaweschipe, nathelss, chyvalrye, Cristendom, hethenesse.*
7. Translate this passage :—

    Ther was also a Doctour of Phisik,
    In all this world ne was ther non him lyk
    To speke of phisik and of surgerye ;
    For he was grounded in astronomye.
                   *   *   *
    The cause I-knowe, and of his harm the roote,
    Anon he yaf the syke man his boote.
    Ful redy hadde he his apothecaries,
    To sende him dragges, and his letuaries,
    For ether of them made other for to wynne ;
    Here frendschipe was not newe to beginne.

8. Write a short life of Cæsar ; and estimate the state of parties at Rome during his lifetime.

9. Explain these passages :—

    (*a.*) Cæsar, I never *stood on ceremonies*,
        Yet now they fright me.
    (*b.*) I must *prevent* thee, Cimber ;
        These couchings and these lowly curtesies
        Might fire the blood of ordinary men,
        And turn *pre-ordinance* and first decree
        In to the *law* of children.

What is the reading of the First Folio for *law* ? Quote instances in which the reading of the First Folio makes better sense than the conjectural emendations of the editors or commentators.

    (*c*) Men are flesh and blood, and *apprehensive*.
    (*d*)   Here thy hunters stand,
        Signed in thy *spoil*, and crimsoned in thy *lethe*.

10. Consider Denham, Waller, Dryden, and Pope as representatives of the Corrective School in English Literature.

11. Give some account of the origin, plan, and construction of Pope's *Essay on Man.* What objections were raised against the principles of the work ?

12. Explain these passages :—

    (*e.*) Respecting man, whatever wrong we call,
        May, must be right, as relative to all.
    (*f.*) Heaven from all creatures hides the book of fate,
        All but the page prescribed, their present state :
        From brutes what man, from men what spirits know :
        Or who could suffer being here below ?
    (*g.*) Man never is, but always to be blest :
    (*h.*) If the great end be human happiness,
        Then nature deviates ; and can man do less ?
    (*i.*) The spider's touch, how exquisitely fine !
        Feels at each thread, and lives along the line.
    (*k.*) All nature is but art, unknown to thee :
        All chance, direction which thou canst not see ;
        All discord, harmony not understood ;
        All partial evil, universal good ;
        And spite of pride, in erring reason's spite,
        One truth is clear, whatever is, is right.

ENGLISH LANGUAGE.

1. State the difficulties in the application of Logical Analysis to Grammar.

2. Distinguish Simple and Compound Sentences.

3. Explain these terms :—*subject-nominative, predicate-verb, predicate-nominative.*

4. Distinguish between *object* and *objective.* How many kinds of Objective do we recognise in Grammar ?

5. Analyse these sentences :—

    (*a.*) Virtue itself escapes not calumny.
    (*b.*) The widow in distress he graciously relieved.
    (*c.*) All our knowledge is ourselves to know.

6. Give some account of the Celtic races, Cymric and Gaelic. What tribes of the Celtic stock settled in Britain ?

7. What effects were produced by the Roman occupation of Britain ? What is the Latin of the First Period ?

D 2

8. Describe the Anglo-Saxon invasion of Britain. Whence did the invaders come, and where did they settle?

9. What effects resulted to the language from the Norman French conquest of England?

10. Explain these passages :—

    (*d.*) A *caitiff recreant* to my cousin Hereford.

    (*e*) Suppose the singing birds musicians,
          The grass whereon thou tread'st the *presence strewed.*

    (*f.*) *Expedient manage* must be made, my liege.

    (*g.*) The Earl of Wiltshire hath the realm, *in farm.*

    (*h.*) *Grace me no* grace, *nor uncle me no uncle.*

    (*i.*) I am bonded to *me my livery here.*

    (*k.*)   Within the hollow crown,
        That *rounds* the mortal temples of a king,
        Keeps Death his court, and there the *antique* sits,
        Scoffing his state, and grinning at his pomp.

11. (*l.*) *Lady.* Madam, we'll play at bowls.

    Queen. 'Twill make me think the world is full of *rubs,*
        And that my fortune runs against the *bias.*

                           WILLIAM RUSHTON, *Professor.*

MODERN LANGUAGES.

Translate into French :—

1. As I spoke, poor Mr. Burchell entered the house, and was welcomed by the family, who shook him heartily by the hand, while little Dick officiously reached him a chair. I was pleased with the poor man's friendship for two reasons : because I knew that he wanted mine, and I knew him to be friendly as far as he was able. He was known in our neighbourhood by the character of the poor gentleman that would do no good when he was young, though he was not yet thirty. He loved to intervals talk with great good sense, but in general he was fondest of the company of children, whom he used to call harmless little men. He was famous, I found, for singing them ballads and telling them stories; and seldom went out without something in his pockets for them. He generally came for a few days into our neighbourhood once a year, and lived upon the neighbours' hospitality.—GOLDSMITH.

2. A very curious circumstance took place in the kingdom of Denmark, in the middle of the last century, relative to the infliction of capital punishments upon malefactors. They were attended from the prison to the place of execution by priests, accompanied by a very numerous procession, singing psalms, etc. : which afforded such a long discourse was addressed by the priest to the culprit, who was hung as soon as he had heard it. This spectacle, and all the pious cares bestowed upon the criminals, so far seduced the imaginations of the common people, that many of them committed murder purposely to enjoy such inestimable advantages, and the government was positively obliged to make hanging dull as well as deadly, before it ceased to be an object of popular ambition.—SYDNEY SMITH.

1. How is the adverb *just* followed by a participle rendered in French?

2. *Marcher, se promener, aller à pied,* mean to walk ; explain the different acceptations of these words.

3. Explain the cases when the subjunctive mood is required in French, and not in other languages; give examples.

4. Give an account of the *Hôtel de Rambouillet*.

5. Which are the fundamental differences between the theatrical school of England as represented by Shakespeare and that of France as represented by Racine?

6. State what you know of the life and works of one of the following authors:—Corneille, Molière, Racine, Bossuet, Lafontaine.

METAPHYSICS.

1. What relation does Metaphysics bear to Logic and to Moral Philosophy respectively?

2. Distinguish an Absolute from a Relative Sceptic. Would you consider Des Cartes as either one or the other?

3. Are there any points of resemblance between the doctrines of Spinoza and those of Berkeley?

4. Give Hobbe's account of Memory and Imagination.

5. Discuss Locke's arguments against Innate Ideas.

6. Is Locke wrong in commencing his Inquiry with a discussion of the Origin of our Ideas?

7. Examine Hume's account of Cause and Effect.

8. How far is Reid's Theory of Natural Signs consistent with the doctrine of Immediate Perception?

9. What province does Kant assign to the Idea of Time?

10. Examine Sir W. Hamilton's arguments to prove that Sight is cognizant of Extension.

11. How does Sir W. Hamilton explain the power of retention by the memory, and the fact of its decay?

12. By what arguments does Mill combat Sir W. Hamilton's assertion that we are incapable of conceiving Infinite Space.

LOGIC.

1. What is the object of the first part of Logic?

2. Define repugnant terms. Have they any relation to the "Laws of Contradiction"?

3. Explain the Comprehension and Extension of a term. Why is Division defined to be an Analysis of the whole of Extension?

4. How far is it true to say that difference partakes of the nature of genus?

5. Give the rules for good Decision, with instances of the breach of each.

6. In dividing propositions according to their quantity, should singular propositions be treated as a separate class, and if not, why not?

7. What is the law of contrary opposition? Could it be arrived at by means of subaltern and contradictory opposition?

8. Explain conversion *per accidens*. Can E be so converted?

9. State some of the modes of defining a Syllogism; which do you prefer, and why?

10. Why must I E O be bad in every figure?

11. Construct Syllogisms in FEgEne, Felapton and Fessape, and reduce them to the first figure.

12. Explain Reduction for impossible. Is it satisfactory?

13. What formal error is involved in reasoning, from the falsehood of the antecedent to the falsehood of the consequence?

Appendix B.
Selection of
Examination
Papers
used at the
Sectional
Examinations.

14. Three-fourths of the army were killed, three-fourths of the army were Prussians. Some Prussians were killed. Give and criticise the remarks of Fowler, Thompson, and Hamilton upon such an argument?

15. Define Induction and its method. What consequences follow if such definition be correct?

16. In what sense is it correct to speak of the uniformity of Nature?

G. J. READ.

FIRST YEAR—PRIZE PAPER.

1. Mention any general properties of regular polygons of any number of sides which may be deduced from propositions of Euclid. If a circle be inscribed in a regular polygon one described about it, and if P, P_1 be the perimeters of the given polygon, of that formed by joining the points of contact of the former circle with its sides, and of that formed by drawing tangents to the latter circle through its angles, show that P, P_1, P_2 are in Geometrical Progression.

2. If a tangent to two circles which touch in C meets them in A, B, show that CA, CB, are at right angles.

3. Prove that two similar and similarly situated polygons have a common centre of similitude, and determine when they have two.

4. The in- and ex-ternal bisectors of the angle A of a right-angled triangle meet BC in D, E, show that DE : 2AB : : AO : BC.

5. Prove that the determinant $(a, b_1 \ldots b_n)$ changes sign by the interchange of two columns. Calculate $\begin{vmatrix} 1 & 1 & 1 \\ \alpha & \beta & \gamma \\ \alpha^3 & \beta^3 & \gamma^3 \end{vmatrix}$, and prove that $\begin{vmatrix} 1 & 1 & 1 \\ -x+y+z, & x-y+z, & x+y-z \\ -x^3+y^3+z^3, & x^3-y^3+z^3, & x^3+y^3-z^3 \end{vmatrix} = 4(x-y)(y-z)(z-x)(x+y+z).$

6. Find the greatest coefficient in the expansion of $(1+x)^{24}$. Find the general term, and the greatest term of $(1+x)^{\frac{11}{3}}$, x being equal to $\frac{3}{5}$.

7. Investigate the equation of e^x. Prove that—
$$\frac{7x^3}{4} - \frac{x}{2} - \left(\frac{1}{2} - 2x^2\right)\frac{3x^2}{3} \log(1-x) = \frac{4x^2}{1.2.3} + \frac{5x^4}{2.3.4} + \cdots + \frac{(n+1)x^n}{(n-2)(n-1)n} + \cdots$$

8. Investigate a condition for the convergency of a series each term of which is positive. When is the series $\sum\limits_{1}^{t=\infty} u_t$ convergent, where $u_t = \frac{t!}{(t-1)!(t-2)!}$?

9. Find the sum of the above series when convergent.

10. Investigate a method for finding the sum of a series of which the nth term is a rational integral function of n of a given degree. Sum the cubes of the first $n-1$ odd numbers.

11. Find a general expression for all the values of $\text{vers}^{-1}a$.

If $\sin^{-1}(a-x) - \cos^{-1}(a+x) = 2\sin^{-1}2a - \frac{\pi}{2}$, show that

$$\sin^{-1}(a-x) = 2i\pi + \sin^{-1}2a + \frac{\pi}{2}.$$

12. The two triangles being described which have A, b, coincident, and a equal but not coincident, show that the distance between the centres of the circles inscribed in them $= \dfrac{\sqrt{a^3 - b^3 \sin^3 A}}{\cos \dfrac{A}{2}}$.

13. If θ be the circular measure of an angle less than $\dfrac{\pi}{2}$, show that

$$\sin \theta > \theta - \frac{\theta^3}{4} < \theta.$$

SECOND YEAR.

1. Prove that every plane section of a sphere is a circle.

Through any two points on a sphere an infinite number of circles can be drawn whose centres lie on a circle passing through the centre of the sphere.

2. State and prove Newton's method of finding the area of a plane curve.

3. Prove (1) by Napier's rules, (2) directly from the figure, that in a spherical triangle right-angled at c, $\tan A = \tan a \operatorname{cosec} b$.

One side of a right-angled triangle is $\dfrac{\pi}{6}$ and the hypothenuse $\dfrac{\pi}{4}$, prove that one angle is also $\dfrac{\pi}{4}$, and find the tangents of the remaining side and angle.

4. Prove that, n being odd, $\sin n\theta = n \sin \theta \prod_{s=1}^{\frac{n-1}{2}} \left(1 - \dfrac{\sin^2 \theta}{\sin^2 \dfrac{s\pi}{n}}\right)$.

For what purpose is this formula useful?

5. Find the equation to the straight line which passes through a given point and is perpendicular to a given straight line.

Ex. Find the lines drawn (1) perpendicular, (2) inclined at angles of $45°$, to the line $x + 2y - 3 = 0$, and through the point of intersection of $2x - 3y + 5 = 0$ } $3x + 2y - 1 = 0$ }.

6. State the method of finding the tangent to a curve in Co-ordinate Geometry, and find that at a given point to the curve $x^3 + y^3 = a^3$.

If the tangents which pass through h, k make angles θ_1, θ_2 with the axis of x, prove that $\dfrac{\cos \theta_1 + \cos \theta_2}{k} = \dfrac{\sin \theta_1 + \sin \theta_2}{h} = \dfrac{2a}{h^3 + k^3}$.

7. Define conjugate points on an ellipse, and show that their eccentric angles differ by $\dfrac{\pi}{2}$.

Can you mention any theorems which flow from this?

8. If the perpendicular from the vertex of a parabola on the chord of contact of tangents from a point be a mean proportional between the perpendiculars on the tangents, prove that the locus of the point from which the tangents are drawn is an equal parabola having the same axis but different vertex, and having its concavity turned in the opposite direction.

9. Prove that $\dfrac{dy}{dx} = \dfrac{dy}{dz} \cdot \dfrac{dz}{dx}$. For what class of functions is this result useful?

Find *directly* $\dfrac{d x^2}{d x}$, and determine $\dfrac{d \dfrac{\sin\frac{x}{x}}{x}}{d x}$, $\dfrac{d (\sin x)}{d x}$.

10. State and prove Taylor's Theorem.

Find three terms of the expansion of $e^{-x} . \tan^{-1} x$.

11. If $x = \xi \cos a - \eta \sin a$, $y = \xi \sin a + \eta \cos a$, prove that—

$$\frac{\left\{ 1 + \left(\dfrac{dy}{dx} \right)^2 \right\}^{\frac{3}{2}}}{\dfrac{d^2 y}{d x^2}} = \frac{\left\{ 1 + \left(\dfrac{d\eta}{d\xi} \right)^2 \right\}^{\frac{3}{2}}}{\dfrac{d^2 \eta}{d \xi^2}}.$$

12. Prove that the circle which passes through three consecutive points on a curve at any point has the same curvature as the curve at that point.

Find the centre and radius of curvature of the curve $xy = a^2$ at any point.

13. Define Integration, and prove the formula for integrating by parts.

Find $\displaystyle\int \frac{dx}{x\sqrt{x^2 + a^2}}$, $\displaystyle\int \frac{dx}{(1 + x^2)^{\frac{3}{2}}}$, $\displaystyle\int_0^{\frac{\pi}{2}} \sin(a \sin x) \cos^3 x \, dx$.

14. Find an expression for the area of a curve, in polar co-ordinates. Determine the whole area of $x^{\frac{2}{3}} + y^{\frac{2}{3}} = 2a^{\frac{2}{3}} y$.

FIRST YEAR.—PASS PAPER.

1. Prove that it is impossible to have the two triangles ABC, A'BC, on the same side of the base BC, and having $AB = A'B$, $AC = A'C$.

2. If a perpendicular drawn from the angle A of a triangle on BC meet it in D, express the square on AB in terms of BC, CA, CD.

How may all cases be included in one general enunciation?

3. If two circles touch each other, the line joining their centres passes through the point of contact.

If the chords of a circle which bisect the angles of an inscribed triangle be equal, the triangle is equilateral.

4. The line which bisects an angle of a triangle divides the opposite side into parts which have the same ratio as the sides enclosing the angle, and conversely.

5. Find the remainder after dividing $x^n - a^n$ by $x + a$, according as n is even or odd.

Reduce $\dfrac{2a(2y - x)^3 - y(x + y)^2 + (y - 2ax)(y - ax)^2}{2xy(3x^2 - 2y^2 + 3xy)}$ to its simplest form.

6. Factorise $-a^3 + b^3 + c^2 + 2bc$, $-a^3 + b^3 - c^3 + 2ac$; and add together

$$\frac{1}{(x-1)^2} + \frac{1}{4(x-1)} + \frac{1}{x+5} + \frac{1}{12(x+2)}.$$

7. Solve the equations—(1.) $2x + \dfrac{3.5x - .7}{4} = 35$.

(2.) $\dfrac{6x - 5}{2x - 1} + \dfrac{10x - 12}{2x - 3} = \dfrac{16x - 9}{2x - 5}$.

(3.) $\begin{aligned} a(x + 2b) - (x + 20) &= 2b(2y - by + 2a) \\ x(a + 4b) + y(b + 4a) &= 0 \end{aligned}$.

8. Define Ratio, Proportion and prove the operations quoted as Componendo, Compounding, Componendo et dividendo.

If y^3 vary as the sum of multiples of x and x^3, and if when $x=3a$, $y=9$, and when $x=a$, $y=b$; show that when $x=a\pm\sqrt{a^2-\frac{b^3}{a}}$, $y=\frac{b^3}{a}$.

9. Find the number of permutations of n things taken r together.

Determine the coefficient of x^3y^2 in $(1+2x-2y)^7$.

10. Determine the interest on £P at R per cent. compound interest after n years, the interest being payable at equal intervals four times a-year.

Find, approximately, when P will double itself at 5 per cent., having given $\log_{\cdot}3 = \cdot 693$.

11. Express the sine and cosine of an angle in terms of the cotangent. Determine all the Trigonometrical functions of 1320°.

12. Prove the formulæ:—

$$\sin A - \sin B = 2\sin\frac{A-B}{2}\cos\frac{A+B}{2}$$

$$\cos 3a = 4\cos^3 a - 3\cos a.$$

$$\sec^2 A + \csc^2 A = 16\csc^2 A \cdot \csc^2 A.$$

13. If $\cot\overline{a}\cot\overline{a-\phi} = \cot\beta\cot(\beta+\phi) = v$, show that $v=-1$ or $\cot a \cot\beta = 0$.

14. Investigate the area of a triangle in terms of the sides.

The ratio of the areas of a regular octagon and regular hexagon having the same perimeter $= \frac{1}{4}(\sqrt{6} + \sqrt{.3})$.

THIRD YEAR.

1. Determine the angle between two straight lines whose equations are given.

Find the angles between the planes $r+z=a$, $x-y=c$, $x-z=b$, and the perpendiculars on each from the point (a, b, c).

2. Investigate the relation between rectangular and polar coordinates in Geometry of three dimensions.

Find the length of the chord of the surface $\frac{x^2}{a^2}+\frac{y^2}{b^2}+\frac{z^2}{c^2}=1$, drawn through the point $(0, 0, c)$.

3. Determine the equations to the circle traced out by the revolution round the line $x-y=1$, $z-x=1$, of the perpendicular upon it from the point $(1, 1, 1)$, and show that the equation to the cone which joins the origin to every point on this circle is $3(x^2+y^2+z^2)+(x+y+z)(y-3z-x)=0$.

Determine also the two sets of circular sections of this cone.

4. Find the generators of a Hyperboloid of one sheet, and show that no two of the same system intersect, each two of opposite systems do so.

What are the generators of $x^2-y^2+4z^2=9$, passing through—

$$\left(\frac{3}{2}, -\frac{3}{2}, -\frac{3}{2}\right).$$

5. Determine the circular sections of the ellipsoid $\frac{x^2}{a^2}+\frac{y^2}{b^2}+\frac{z^2}{c^2}=1$.

Deduce the position of the Umbilics.

6. Determine the directions and magnitudes of the axes of the general Central Quadric.

Appendix B.

Selection of Examination Papers and at the Sessional Examinations.

7. Find the Functional and Differential Equations of Cylindrical Surfaces.

8. Determine the magnitude and direction cosines of the radius of curvature of a curve in space.

Show that the radius of curvature of the curve given by the equations

$$x = a \cos \theta, \ y = a \sin \theta, \ z = \frac{a}{2 \tan \alpha} \left(e^{\theta \tan \alpha} + e^{-\theta \tan \alpha} \right) \text{ is } \rho = \frac{\sin^2 \alpha}{\cos \alpha} \cdot \frac{z^2}{a}.$$

9. Find the condition that $M dx + N dy$ may be an exalt differential $d\phi$, and when so find ϕ.

Ex.: $\left(2 \tan^{-1} \dfrac{y}{x} - y + 1 \right) dx + \left(2 y \tan^{-1} \dfrac{y}{x} - x - 1 \right) dy.$

10. Solve the equations

$(1) \ \dfrac{dy}{dx} + \phi(x) \cdot y = \psi(x)$

$(2) \ x\phi\left(\dfrac{dy}{dx} \right) + y\psi\left(\dfrac{dy}{dx} \right) - \chi\left(\dfrac{dy}{dx} \right)$

$(3) \ (x - y) dx + (x + y) dy = 0$

11. Explain the nature of a singular solution, and show how to derive it from the complete primitive.

Solve the equation $\dfrac{y^2}{y - px} = \int^x \left(\dfrac{p x^2}{y - py} \right), \ \left(p = \dfrac{dy}{dx} \right),$ and determine the singular solution when $f(\lambda) = \lambda^3.$

12. Explain how to find the solution of equations of the forms

$$\Sigma \left\{ A \frac{d^{i}}{dx^{i}} \cdot \frac{d^{j}}{dy^{j}} \right\} Z = 0, \ \Sigma \left\{ Be^{a} y^{b} \frac{d^{i}}{dx^{i}} \cdot \frac{d^{j}}{dy^{j}} \right\}. \ Z = 0 \text{ where } i + j = \text{a given}$$

number a.

Solve $\dfrac{d^2 y}{dx^2} - \dfrac{dy}{dx} + y = x^2 - x + 1$

$$ab \left(\dfrac{d^2 z}{dx^2} + \dfrac{d^2 z}{dy^2} \right) = (a^2 + b^2) \dfrac{d^2 z}{dx dy}.$$

CHEMISTRY.   (Pass Questions.)

[N.B.—1. The name and faculty of each student are to be written on the first page of each book.

2. Answers to any twelve of the following questions will be sufficient for the pass examination, provided that two of the questions be from the organic portion.]

1. Give examples of monad, dyad, triad, and tetrad metals and metalloids. Mention the elements which form the connecting links between the metals and metalloids.

2. Illustrate by symbols *double decomposition* in the action of sodium carbonate on calcium nitrate; of potassium sulphide on ferrous sulphate; of sodium chloride on argentic nitrate; of magnesium sulphate on barium chloride.

3. What is the difference between an atom and a molecule. Represent by a diagram the atom and the molecule of hydrogen. What are their respective weights?

4. Prepare oxygen by catalytic action. State its properties in its allotropic form.

5. Prepare synthetically water, terchloride of phosphorus, ferrous iodide, and sulphide of copper.

6. Give the process for preparing any oxygen compound of chlorine that may be known to you.

7. Sulphuric acid is dibasic ; write in symbols the different salts which may be formed by potassium, calcium, and copper, respectively, taking the place of the replaceable hydrogen of the acid.

8. There are in inorganic chemistry one volatile and several fixed alkalis ; what are their names ?

9. Pass chloride of ammonium in vapour over caustic lime. What reaction ensues ?

10. In what proportion does nitrogen exist in the atmosphere ? What purpose does it serve ? Prepare this element from one of its compounds.

11. Prepare the hydrogen compound of chlorine synthetically and analytically.

12. Where does iodine occur ? Prepare it. State what oxygen compounds of it are known.

13. Give the formulæ of the corresponding oxygen and hydrogen compounds of chlorine, iodine, bromine, and fluorine which are known.

14. Detect by any process known to you fluorine in fluoride of calcium.

15. Prepare sulphuric acid from iron pyrites.

16. How is ordinary mortar prepared ? What is the theory of its hardening ?

17. With what oxide is manganese monoxide isomorphous ? Write the formulæ of the indifferent and of the acid oxygen compounds of this metal.

18. Three solutions contain, respectively, ferrous sulphate, manganic sulphate, and cupric sulphate. How would you detect the metallic salt in each ?

19. Air is passed in a reverberatory furnace over litharge. What body is formed ? What is the action, by heat, of dilute nitric acid on this body ?

20. Give the formulæ of the oxides of mercury. How would you prepare them ?

21. By what simple tests would you distinguish calomel from corrosive sublimate ?

22. Prepare argentic nitrate. How would you ascertain the presence of copper salts in it ? What would be the effect of placing metallic mercury in the solution of the silver salt ?

23. Describe a direct and an indirect way of estimating nitrogen in organic compounds.

24. Mention the different steps that occur in the oxidation of common or ethylic alcohol.

25. Mention some of the monatomic alcohols.

26. Explain the meaning of the terms homologous and heterologous series.

27. What are the amines ? Into which classes are they arranged ? Write by a general diagram their constitution as derivatives of ammonia.

28. Name this body—

$$C_2H_4O \atop H \atop H \Big\} N.$$

29. Describe the relations of the axes of the regular system. Give the notation of its face.

Appendix B.

Selection of Examination Papers used at the Sessional Examination.

50. What do you mean by the direct and the inverse octahedron of the square prismatic system?

31. How do you ascertain the molecular weight of an organic acid?

32. Prepare aldehyde from ethylic alcohol.

33. What are the simple and the compound ethers?

34. Describe the process for preparing ordinary ether.

35. Name the acids of methylic and of ethylic alcohol.

36. Give the graphic formula of any saturated hydro-carbon.

CHEMISTRY. (PRIZE QUESTIONS.)

[N.B.—The answer to each student are to be written on the first page of each book.]

1. Define atom, equivalent, molecule. Give the atomic and the molecular weights of hydrogen, oxygen, and potassium.

2. The molecular weight of ammonia is 17; calculate its specific gravity, air being = 1.

3. Describe the different steps in the manufacture of sulphuric acid on the large scale. Represent by symbols the different reactions. Explain the nature of the crystals of the lead chamber and the cause of their formation.

4. Iodine in vapour is passed over phosphorus and the compound formed is brought into contact with water. Explain by symbols the various reactions.

5. Silica is acted on by hydrofluoric acid; write out the reactions in symbols. What is the nature of the compound formed, and what changes does water produce upon it?

6. Define what is meant by the atom-fixing and molecule-forming power of an element. Illustrate this in the case of nitrogen.

7. Explain by symbols the chemical reactions in the metallurgic process of extracting lead from the sulphide. How is silver, when present in small quantity in lead, economically extracted by Pattinson's method?

8. Arsenious acid, copper, zinc, iron, barium, calcium, potassium, and ammonium salts are in the same solution; separate each from each other, and detect the presence of each by its characteristic reagent.

9. Prepare marsh and defiant gas. Show that the composition of marsh gas is CH_4 from the following data, viz.:—100 volumes of the gas are mixed with 300 volumes of oxygen, and the mixture is exploded by the electric spark; after explosion there remain 200 volumes of gas, of which 100 volumes are absorbed by caustic potash and 100 volumes of oxygen remain.

10. Define the "law of even numbers." Illustrate it by some examples.

11. Point out the distinction between the equivalent and the molecular weight of an organic acid. Illustrate this point by an example. What are the means employed for controlling the molecular weight?

12. What are the means generally employed for ascertaining the molecular weight of an organic base?

13. One hundred grains of an organic base give on combustion—

$$
\begin{array}{rl}
C & = 77\cdot43 \\
H & = 7\cdot53 \\
N & = 15\cdot05 \\
\hline
& 100
\end{array}
$$

One hundred grains of the platinum double salt of the same base give on combustion 32·94 grains of metallic platinum. Calculate the formula of the base: Pt = 197.

14. What is the constitution of the amines and amides? Prepare diethylamine and diacetamide.

15. Prove that the natural alkaloids are tertiary monamines with the exception of coniine. To what class of the amines does the latter belong?

16. Give a process for preparing the compound ethers. Prepare benzoic ether.

J. BLYTH, M.D., *Professor.*

ANATOMY AND PHYSIOLOGY.

1. State the changes produced in the blood by respiration.
2. Describe the changes of the air in respiration.
3. Give an account of the influence of the nervous system in the maintenance of respiration.
4. The structure and actions of the auriculo-ventricular and arterial valves of the heart.
5. Describe the structures entering into the coats of an artery.
6. State the cause of the arterial pulse.
7. Describe the hæmadynamometer invented by Poiseuille.
8. Describe the elementary structures of the nervous system.
9. Describe the spinal membranes — the ligamentum denticulatum and the connexions of the two roots of the spinal nerves with the medulla spinalis.
10. Describe the meso-cephalon, or pons Varolii.
11. Mention the structures composing the trachea and bronchial tubes.
12. Describe the soft palate and the several passages which communicate with the pharynx.

PRACTICAL ANATOMY.

1. Describe the articular surfaces, ligaments, and synovial apparatus of the sterno-clavicular articulation.
2. Describe the articular surfaces of the astragalus.
3. Mention the origins, insertions, and relations of the hamstring muscles.
4. State the attachments and relations of the pterygoid muscles.
5. Contrast the right with the left subclavian artery.
6. Describe the course and relations of the brachial artery.
7. Describe the origin, course, relations, and branches of the internal pudic artery.
8. Describe the great sciatic nerve.
9. State the connexions of the vesica urinaria in the male subject.
10. What are the objects presenting themselves on viewing the canal of the urethra in the male, from the uvula vesicæ to the meatus externus ?
11. Mention the connexions of the submaxillary gland.
12. Describe the course and branches of the brachial or median nerve.

J. H. CORBETT.

MEDICAL, SESSIONAL, AND PRIZE EXAMINATION—SURGERY.

1. What are the changes which characterise the blastema of an inflamed part, and their specific differences?
2. What are the properties of pus, and the prevailing doctrines as to its origin?

3. Describe the five methods in which the healing of open incised wounds may be accomplished, and detail the process in each.

4. Describe the two conditions of the system known under the name of Pyæmia, or Systemic infection.

5. Relate the different kinds of Erysipelas, and describe the three stages of the Phlegmonous form, with the appropriate treatment for each.

6. Give the different modes of treating Hæmorrhage.

7. What are the several watery discharges found as an accompaniment, with severe injuries of the head, their pathology, and treatment?

8. Describe a case of strangulated inguino-scrotal hernia, the different methods of treatment, and the operation kelotomy.

9. Describe the process of union in fractured bones, and the different methods of treating them.

10. How would you execute the different steps of an amputation of the thigh in its middle, by the flap, and also circular method, and how dress the stump, and the after treatment.

<div align="right">Professor TANNER.</div>

1. Describe the peculiarities of that variety of pelvis which is larger than natural in all its dimensions. What disadvantages and dangers are found to accrue from this form of pelvis in the unimpregnated female,—during labour,—and after?

2. In the placenta do the streams of the fœtal and maternal circulations come into absolute contact? Describe how they are circumstanced with regard to each other.

3. Describe the principal changes in the breast as a result of pregnancy. How soon do they begin to shew themselves, and are these changes equally valuable as signs of this condition in first and subsequent pregnancies?

4. In an abortion the cord has broken, and the fœtus has come away, leaving placenta and membranes in the uterus; how would you manage the case? what dangers are to be apprehended? and what is the probable termination?

5. Describe the course and movements of the child's head through the pelvis, from the commencement to the termination of a natural labour.

6. Give the diagnosis, both physical and general, between a case of twins, and a cross-birth.

7. In an ordinary labour the head has proceeded so far as nearly to rest on the perinæum: circumstances render it desirable that the labour should be terminated by the application of the forceps; state how you would proceed in every step of the operation.

8. Give the principal forms of retained placenta, and the treatment in each.

9. What indications would lead you to apprehend the approach of puerperal convulsions; and what means would you take with a view to ward them off?

10. How soon after birth should the child be put to the breast? How soon may the milk be expected? What physiological result commonly follows the first application of the child to the breast?

<div align="right">J. (R.) HARVEY A.B., M.D., *Professor*.</div>

MEDICINE.

1. What organs are affected in intermittent fever? Explain the cause of such injury in each case.
2. Describe the lesions of the intestines in typhoid fever, and the consequences resulting from such organic changes.
3. Describe the progress of a variolous pustule in its development, and state the sequelæ of this disease.
4. What are the sequelæ in scarlatina?
5. State the reasons which would induce you to give wine in fever.
6. What is the difference in the character of the delirium in typhoid and typhus fever?
7. How is pneumothorax produced?
8. How does disease of the heart influence the brain, lungs, liver, and kidneys.
9. Why is hydrocephalus so frequent in infancy?
10. Why are affections of the liver so common in tropical climates?
11. What are the symptoms and cause of bilious cholera?
12. What are the symptoms and causes of gall-stones?
13. What are the sources of blood-poisoning in typhus?
14. State the mode of natural cure in tubercular consumption.
15. Describe a case of diphtheria to a fatal termination.

DENIS C. O'CONNOR.

MEDICAL PORTION OF MEDICAL JURISPRUDENCE.

1. Does the presence of the hymen rebut the supposition of pregnancy?
2. In a case of abortion, what are the chief points both as regards the fœtus and the mother, to which the medical man should direct his attention?
3. In a recent trial a dying declaration, tendered in court in evidence, was pronounced by a medical witness to be false, because the substance of the brain had been injured by the fractured bone: was such an opinion justified by medical experience, in cases of injuries of the substance of the brain?
4. Explain the term atelectasis, show the importance of a knowledge of such a condition in the examination of a supposed case of infanticide.
5. Describe the various means to be adopted in testing for blood on clothes.
6. Describe the mode of conducting an examination in a case of poisoning by prussic acid.

J. BLYTH, M.D.

MEDICAL JURISPRUDENCE (2).

1. State the provisions of the Act of Parliament, the main object of which is to prevent secret delivery; and explain wherein the crime mentioned in it differs from that of Infanticide.
2. On what grounds did Lord Mansfield (in the Douglas Peerage case) justify the admission of evidence as to parental likeness?
3. Explain what is meant by saying that the main character of insanity, in a legal view, is said to be the existence of delusion.
4. What is the nature of the delusions which are considered to require legal interference?
5. In relation to criminal responsibility, point out the distinction which exists between physicians and jurists in reference to the plea of insanity.

MARK S. O'SHAUGHNESSY.

REAL PROPERTY.

1. Why are lands called real property, and why are goods and chattels called personal property?

2. When the following legal terms are used, what will be comprised within them?

    (*a*) messuage; (*b*) tenement; (*c*) and (*d*) premises.

3. Why is an estate tail an estate of freehold?

4. What is a tenant in tail after possibility of issue extinct?

5. What are the rights of a tenant in tail in possession in respect of granting leases?

6. Explain the effect, respecting lands, of the registration of a *Lis pendens.*

7. How did the "Act for rendering a release as effectual for the conveyance of freehold estates as a lease and release by the same parties" operate in abolishing the lease for a year formerly in use? What is now sufficient for the conveyance of all corporeal hereditaments?

8. What is the object of expressing in a conveyance, that the purchaser shall hold, not only unto, but *unto and to the use* of himself and his heirs?

9. What is the difference between a tenancy at will, and a tenancy by sufferance?

10. What is a lease for years by *estoppel?*

11. Explain the object of creating long terms of years by settlement, will, or mortgage deed, the same being vested in trustees, and no rent reserved.

12. What, on such occasions, is meant by a proviso for *cesser?*

BOTANY AND ZOOLOGY.

1. Describe the structure of an orthotropous ovule.

2. Define the gynœcium of any flowering plant you please to name, under the heads of

    (*a*)—Adhesion.
    (*b*)—Cohesion of carpels.
    (*c*)—Number of (1) carpels and of (2) cells.
    (*d*)—Number of ovules in each cell.
    (*e*)—Position of ovules.

3. Name, without comment, three British orders of gamopetalous plants, whose seeds have little or no albumen.

4. In what British orders of monocotyledons is a double perianth present?

5. Describe the spore-fruit of a typical fern.

6. Define the class of cephalopods.

7. In what orders of insects is the oral apparatus strictly termed "haustellate"?

8. Briefly contrast the group of marsipobranchs (or cyclostomes) with the higher vertebrates.

9. How do the mud-fishes (sirenoids) resemble the ganoid fishes (as limited by Müller)?

10. Define the order carnivora (excluding the seals and their allies).

J. REAY GREENE, B.A., M.D.

GEOLOGY AND MINERALOGY.

1. What are the characters of Aqueous Rocks; and what features serve to distinguish Lacustrine deposits from such as have a Marine origin?

2. What is the nature of Trap Rocks; what are the minerals which enter into their composition, and mention localities in the British Isles where these rocks occur.

3. What districts in Ireland afford Plutonic Rocks, and what is the composition of these rocks?

4. What is the position and nature of the rocks known as Huronian?

5. What is the position of the Arenig or Stiperstone Rocks; and name some fossils which characterize them.

6. What is the position of the Limestones of Torquay and Plymouth; and mention some of the fossils which they afford.

7. To what families of plants do Lepidodendra and Calamites belong; and in what horizons do they first appear?

8. What forms of Mammals have the Triassic strata afforded; and in what portion of the formation do these occur?

9. Describe the fossil known as *Archæopteryx Macrura*, and state its geological position?

10. What is the position of the Hastings Sands; and what forms of reptiles have been obtained therefrom?

11. Where, and under what circumstances, are the Miocene strata represented in Ireland?

12. To what system of crystals does Selenite belong; and what is its composition?

13. To what family of minerals does Opal appertain; and what are its constituents?

ROBERT HARKNESS, *Professor.*

CIVIL ENGINEERING.

1. What is concrete? Describe some of the mechanical methods adopted for mixing it.

2. Describe and give examples of the use of large iron cylinders in getting in foundations under water.

3. What is the centreing used in the erection of a masonry bridge? Describe the external forces to which it is subject during the erection of the bridge, and give a sketch of the truss you would employ in the centre for a stone elliptic arch of 80 span and 20 feet rise.

4. Describe some of the forms of structure that have been employed in the top and bottom booms of Warren girders for spans varying from 60 to 80 feet.

5. If you had a single line of railway carried between two boiler plate-girders over a span of 80 feet, describe the structure of the roadway, and how it would be attached to the girders.

6. It has been proposed to adopt a guage for railways varying from 2 feet to 3 feet 6 inches, as special cases. What are the circumstances that would render such a guage advisable? Mention some of the proposed differences between such a railway and the ordinary class of railways now made, as regards gradients, curves, kind of engine to be used, permanent way, nature of rolling stock, speed, &c.

7. Explain the manner in which the variation in the travel of the valves of a locomotive varies the amount of expansion.

8. Explain the manner in which the variation of travel of the valve is obtained by the link motion.

9. Describe the action in a complete stroke of a Cornish engine.

10. Describe the drilling machine, explaining the manner in which the self-acting feed is obtained.

GEOMETRICAL DRAWING.

1. Explain the construction of a diagonal scale.

2. Find the centre of a circle of given radius which touches a given line and a given circle.

3. If two right lines be parallel and one be perpendicular to a plane the other shall be also perpendicular to that plane.

4. Given the projections of a line and a point find the projections of a line that shall pass the point and be parallel to the line.

5. Given the projections of a line and a point find the traces of a plane that shall pass through the point and be perpendicular to the line.

6. The projections of a sphere are given and one of the projections of a point in the surface, find the other.

7. The side of a cube is two inches, the projection on the horizontal plane of its lowest angle and the trace on same plane of its lowest face are marked, the angle of slope of the plane and the angle which one side of the face in that plane makes with its trace being given, find the projection of its cube.

8. Construct the section of the irregular body in figure 1, made by the vertical plane standing on the line A B.

9. Explain the method of finding the isometric projection of a curve which lies in one of the isometric planes.

10. Find the shadow cast in the horizontal plane by the body represented in figure 1.

11. Find the vanishing point and measuring point and line for the line a b in figure 2.

12. Describe the capital of the Ionic order and the Triglyph in the Doric order. What is meant by the entasis of a column?

SURVEYING, LEVELLING, &c.

1. A length that is marked on a map as 10 metres, is found to measure nine and a half inches, construct a scale of feet for the map.

2. The acreage of a map, taken by measurement from the map itself, is found to be 146a. 3r. 19r., and the scale is found to err 0·15 of an inch on its nominal length of 10 inches, find the true area of the survey.

3. How would you set out on the ground a line perpendicular to another at a given point of it, using only the chain?

4. How would you examine the adjustment of the small bubbles on the horizontal limb of a theodolite?

5. In the transit theodolite, as constructed by Elliott, show that you can set it up so that there shall be no index error.

6. Describe the method you would adopt of keeping a level field book, and explain the check you have on the accuracy of the numerical work.

7. Describe the method of adjusting a level given by Gravatt, and state what you know as to (a) its efficiency in attaining the object proposed by him, (b) the necessity for the adjustment he sought to attain.

8. When the three-staff method of adjusting a level is used merely to obtain the readings of level point on staffs at a considerable distance apart, state accurately what is the nature of the adjustment into which the level is brought.

Appendix B.
Selection of
Papers
used at the
Sessional
Examinations.

9. Calculate the solid contents of the wing wall shown in the sketch Fig. 1.

10. Describe the method of setting out a circular curve with the chain and theodolite.

ALEXANDER JACK, *Professor.*

EQUITY JURISPRUDENCE.

1. Define a constructive trust, as distinguished both from express and from implied trusts.

2. In what light does Equity regard common sailors, and what circumstances will be considered grounds for giving relief against contracts respecting their prize money or wages?

3. State some of the circumstances which have been considered as evidence that a conveyance was intended merely by way of security for money, and not as a deed of purchase.

4. When a solicitor is a trustee, under what circumstances will he be allowed to charge for professional services in relation to the trust, and of what nature must such services be to entitle him to remuneration for them?

PERSONAL PROPERTY.

1. Explain the principle upon which the surety for a debt may be discharged from his liability by the conduct of the creditor.

2. If personal property be given to A. for life, and after his decease to B, what interest does B acquire? What would be the result should B die during the life-time of A?

3. Suppose, in the above case, the property were real estate, what would B take? Would it make any difference if the gift were by will?

4. In the event of separation between husband and wife, to whom does the custody of their children belong? What would deprive the father or the mother of being regarded by a court with favour in respect to their children?

5. Upon the division of the personal estate of an intestate, what is the place of the half-blood, and what of the whole-blood?

CONTRACTS.

1. What is the difference in the effect of a gift of chattels by mere word of mouth, and a gift of chattels by Deed?

2. Distinguish which of the following two cases was held to come under the fourth section of the Statute of Frauds as an interest in or concerning land; and explain the reasons for the decision:—

(*a.*) An agreement that the plaintiff should be allowed to take water from a particular well.

(*b.*) Where the plaintiff had sold to the defendant a growing crop of potatoes.

3. What are marriage brocage contracts, and how does the law regard them?

4. What were the grounds of the decision, that the winner of a wager—whether a particular person had, before a particular day, bought a waggon—could recover the amount of the wager at law against the loser?

E 2

Appendix C.

List of Students who obtained Honors or Prizes at the Sessional Examinations.

APPENDIX C.

LIST of STUDENTS who obtained HONORS or PRIZES at the SESSIONAL EXAMINATIONS in May and June, 1870–1.

GREEK (3rd Year.)
William C. Taylor, . . . 1st.

GREEK (Senior).
James J. Hynes, . . . 1st.
James J. O'Donoghue, . . 2nd.
John Ahearne, ... 3rd.

GREEK (Junior).
Edward Horan, ... 1st.

LATIN (Third Year.)
William C. Taylor, . . . 1st.
James Hurley, ... 2nd.

LATIN (Senior).
James J. O'Donoghue, . } 1st.
John Ahearne, . . . } equal.
James J. Hynes, . . . 3rd.
Augustus Barnard, . . . 4th.

LATIN (Junior).
Edward Horan, ... 1st.
Thomas Lindsay, . . . 2nd.

MATHEMATICS (3rd Year).
Charles M'Cartie, . . . 1st.

MATHEMATICS (2nd Year).
Christopher Garde, . . . 1st.
James J. Williams, . . . 2nd.
Luke Franklin, ... 3rd.

MATHEMATICS (1st Year.)
Thomas Lindsay, . . . 1st.
Henry M'Cleland, . . . 2nd.
John Duggan, ... 3rd.
John M'Cartily, . . . } 4th.
William Robinson, . . } 5th.

FRENCH (Senior).
John Heron, ... } 1st.
Daniel Croley, . . . } equal.
Henry M'Cleland . . . 3rd.

FRENCH (Junior).
Edward Horan, ... 1st.

FRENCH (Medical).
James Hynes, ... 1st.
Timothy Mulland, . . . 2nd.
James Moran, ... 3rd.
William Gleeson, . . . 4th.
William L. Grand, . . . 5th.

ENGLISH LITERATURE.
James Hurley, ... 1st.
William C. Taylor, . . . 2nd.

ENGLISH LANGUAGE.
Thomas Lindsay, . . . 1st.
Martin Howard, ... 2nd.

EARLY ENGLISH.
William D. Blyth, . . . 1st.
James Hurley, ... 2nd.

HISTORY.
William C. Taylor, . . . 1st.
James Hurley, ... 2nd.

LOGIC.
Christopher Garde, . . . 1st.
James J. Hynes, . . . 2nd.

NATURAL PHILOSOPHY (Senior).
Thomas Lindsay, . . . 1st.
Luke Franklin, ... 2nd.
James J. Hynes, . . . 3rd.

NATURAL PHILOSOPHY (Medical).
James Moran, ... 1st.
Christopher Gunn, . . . 2nd.

EXPERIMENTAL PHYSICS.
William D. Blyth, . . . 1st.

EXPERIMENTAL PHYSICS.
Henry Haycroft, ... 1st.

GEOLOGY AND MINERALOGY.
William D. Blyth, . . . 1st.
John Heron, ... 2nd.

CHEMISTRY.
William D. Blyth, . . . 1st.
James Moran, ... 1st.
John Heron, ... 2nd.

ENGINEERING (1st Year).
John Duggan, ... 1st.
O'Byrne Crowe, . . . 2nd.

ENGINEERING (3rd Year).
Henry Haycroft, ... 1st.

ENGINEERING (Office Work).
Henry Haycroft, ... 1st.
C. P. Bolton, ... 2nd.

JURISPRUDENCE (LAW).
Henry Thynne, ... 1st.

ENGLISH LAW (1st Year).
Henry Thynne, ... 1st.

PRACTICE OF MEDICINE.
Francis Touhy, . . . } 1st.
Joseph Wilson, . . . } equal.
George Vickery, . . . 3rd.
James M'Cartily, . . . 4th.

MEDICAL JURISPRUDENCE.
Francis Touhy, ... 1st.
Joseph Wilson, ... 2nd.
George Vickery, ... 3rd.

MIDWIFERY.
Henry Corby, ... 1st.
Henry S. Madders, . . . 2nd.
Thomas Widsten, . . . 3rd.
Timothy Crowley, . . . 4th.

SURGERY.
John G. Collis, ... 1st.
Thomas B. Whitten, . . 2nd.

PRACTICAL ANATOMY (3rd Year).
James M'Cartily, . . . —
John G. Collis, ... —
Thomas Whitten, . . . —
Henry S. Madders, . . . —

PRACTICAL ANATOMY (2nd Year).
John E. Corbett, . . . 1st.
Ringrose Atkins, . . . 2nd.
Richard R. Leader, . . . 3rd.
John R. Leech, ... 4th.
Carew Smyth, ... 5th.

MATERIA MEDICA.
Robert Adams, ... 1st.
John L. Corbett, . . . 2nd.

PRACTICAL CHEMISTRY.
Bartholomew O'Brien, . . 1st.
Ringrose Atkins, . . } 2nd.
Edward Applebie, . . } equal.
John L. Corbett, . . . 4th.
Philip Benson, . . } Certificates
William D. Blyth, . . } of
Michael Ronan, . . } Honor.
Caleb Powel, . . }

ANATOMY AND PHYSIOLOGY (2nd Year).
Ringrose Atkins, . . . 1st.
John L. Corbett, . . . 2nd.
William Molloy, . . . 3rd.
Bartholomew O'Brien, . . 4th.
Richard Leader, . . . 5th.
Richard R. Leech, . . . 6th.

ANATOMY AND PHYSIOLOGY (1st Year).
James Moran, . . . 1st.
John P. Greaney, . . . 2nd.

APPENDIX D.

SELECTION OF PAPERS USED AT THE SCHOLARSHIP EXAMINATIONS. SESSION 1871–72.

GREEK.—JUNIOR LITERARY SCHOLARSHIP OF SECOND YEAR.

Translate:—

(A.) EURIPIDES—Rhesus, 527–561.

ΧΟ. τίνος ἁ φυλακά; τίς ἀμείβει   στρ.
    τὰν ἐμάν; πρῶτα
    δύεται σημεῖα καὶ ἑπτάποροι
    Πλειάδες αἰθέριαι·
    μέσα δ' αἰετὸς οὐρανοῦ ποτᾶται.
    ἔγρεσθε, τί μέλλετε; κοιτᾶν
    ἔγρεσθε πρὸς φυλακάν.
    οὐ λεύσσετε μηνάδος αἴγλαν;
    ἀὼς δὴ πέλας ἀώς·
    γίγνεται, καί τις προδρόμων
    ὅδε γ' ἐστὶν ἀστήρ.

ΗΜΙΧΟ. τίς ἐκηρύχθη πρώτην φυλακήν;
ΗΜ. Μυγδόνος ᾗ φασι Κόρυμβον.
ΗΜ. τίς γὰρ ἐπ' αὐτῷ; ΗΜ. Κίλικας Παίων
    στρατὸς ἤγειρεν. ΗΜ. ἡμεῖς δ' ἡμᾶς;
ΗΜ. οἰκοῦν Λυκίων πέμπτην φυλακὴν
    βάντες ἐγείρομεν
    καιρὸς κλήρου κατὰ μοῖρον.

ΧΟ. καὶ μὴν αἰω· Σιμόεντος   ἀντ.
    ἡμένα κοίτας
    φοινίας ὑμνεῖ πολυχορδοτάτῳ
    γήρυϊ παιδολέτωρ
    μελοποιὸς ἀηδονὶς μέριμναν.
    ἤδη δὲ νέμουσ' ἐπ' Ἴδαν
    ποίμνια· νυκτιβρόμον
    σύριγγος ἴαν κατακούω·
    θέλγει δ' ὄμματος ἕδραν
    ὕπνος· ἁδιστος γὰρ ἔβα
    βλεφάροις πρὸς ἀοῦς.

ΗΜ. τί ποτ' οὐ πελάθει σκοπός, ὃν ναῶν
    Ἕκτωρ ἄγρυπνα κατέστησ';
ΗΜ. ταρβῶ· χρόνιος γὰρ ἄπεστιν.
ΗΜ. ἀλλ' ἦ κρυπτὸν λόχον εἰσαίων
    διδολὼς; τάχ' ἂν εἴη φοβερόν.

1. Explain the construction and supply ellipses, wherever you may think it necessary, in the above extract.

2. Give the meaning and derivation of each of the following words:— πλάστιγξ, ὀργάς, φανείος, ξύνθημα, δίσσος, ἀμβλύ, ἀντηρίς, μάραγνα, ὕπαρχος.

3. What is there remarkable in the source from which the plot of the *Rhesus* is taken, as compared with other Greek tragedies?

(B.) HOMER—*Odyssey*, iii., 430–463.

"Ὡς ἔφαθ᾽, οἱ δ᾽ ἄρα πάντες ἐποίπνυον. ἦλθε μὲν ἄρ βοῦς
ἐκ πεδίον, ἦλθον δὲ θοῆς παρὰ νηὸς ἐΐσης
Τηλεμάχου ἕταροι μεγαλήτορος. ἦλθε δὲ χαλκεὺς
ὅπλ᾽ ἐν χερσὶν ἔχων χαλκήϊα, πείρατα τέχνης,
ἄκμονά τε σφῦραν τ᾽ εὐποίητόν τε πυράγρην,
οἷσίν τε χρυσὸν εἰργάζετ᾽· ἦλθε δ᾽ Ἀθήνη
ἱρῶν ἀντιόωσ᾽.   ὁ γέρων δ᾽ ἱππηλάτα Νέστωρ
χρυσὸν ἔδωχ᾽· ὁ δ᾽ ἔπειτα βοὸς κέρασιν περίχευεν
ἀσκήσας, ἵν᾽ ἄγαλμα θεὰ κεχάροιτο ἰδοῦσα.
βοῦν δ᾽ ἀγέτην κεράων Στρατίος καὶ δῖος Ἐχέφρων.
χέρνιβα δέ σφ᾽ Ἄρητος ἐν ἀνθεμόεντι λέβητι
ἤλυθεν ἐκ θαλάμοιο φέρων, ἑτέρῃ δ᾽ ἔχεν οὐλὰς
ἐν κανέῳ.   πέλεκυν δὲ μενεπτόλεμος Θρασυμήδης
ὀξὺν ἔχων ἐν χειρὶ παρίστατο, βοῦν ἐπικόψων.
Περσεὺς δ᾽ ἀμνίον εἶχε.   ὁ γέρων δ᾽ ἱππηλάτα Νέστωρ
χέρνιβά τ᾽ οὐλοχύτας τε κατήρχετο, πολλὰ δ᾽ Ἀθήνη
εὔχετ᾽ ἀπαρχόμενος, κεφαλῆς τρίχας ἐν πυρὶ βάλλων.
αὐτὰρ ἐπεί ῥ᾽ εὔξαντο καὶ οὐλοχύτας προβάλοντο,
αὐτίκα Νέστορος υἱὸς, ὑπέρθυμος Θρασυμήδης,
ἤλασεν ἄγχι στάς· πέλεκυς δ᾽ ἀπέκοψε τένοντας
αὐχενίους, λῦσεν δὲ βοὸς μένος.   οἱ δ᾽ ὀλόλυξαν
θυγατέρες τε νυοί τε καὶ αἰδοίη παράκοιτις
Νέστορος, Εὐρυδίκη, πρέσβα Κλυμένοιο θυγατρῶν.
οἱ μὲν ἔπειτ᾽ ἀνελόντες ἀπὸ χθονὸς εὐρυοδείης
ἔσχον· ἀτὰρ σφάξεν Πισίστρατος, ὄρχαμος ἀνδρῶν.
τῆς δ᾽ ἐπεὶ ἐκ μέλαν αἷμα ῥύη, λίπε δ᾽ ὀστέα θυμὸς,
αἶψ᾽ ἄρα μιν διέχευαν· ἄφαρ δ᾽ ἐκ μηρία τάμνον
πάντα κατὰ μοῖραν, κατὰ τε κνίσῃ ἐκάλυψαν
δίπτυχα ποιήσαντες, ἐπ᾽ αὐτῶν δ᾽ ὠμοθέτησαν.
καῖε δ᾽ ἐπὶ σχίζῃς ὁ γέρων, ἐπὶ δ᾽ αἴθοπα οἶνον
λεῖβε· νέοι δὲ παρ᾽ αὐτὸν ἔχον πεμπώβολα χερσίν.
αὐτὰρ ἐπεὶ κατὰ μῆρ᾽ ἐκάη, καὶ σπλάγχν᾽ ἐπάσαντο,
μίστυλλόν τ᾽ ἄρα τἆλλα καὶ ἀμφ᾽ ὀβελοῖσιν ἔπειραν,
ὤπτων δ᾽ ἀκροπόρους ὀβελοὺς ἐν χερσὶν ἔχοντες.

1. Comment on the expressions, πείρατα τέχνης—ἀνθεμόεις λέβης—κατήρχετο—ἀπαρχόμενος—ὠστευα ποιήσαντες.

2. Derive and explain :—πυράγρην, οὐλὰς (distinguish in meaning between οὐλὰς and οὐλαί), οὐλοχύτας, ἐγχείους, ἀκροπόρους, πυράγρην.

3. Analyse the following grammatical forms, and give their equivalents in the common dialect :—ἀντιόωσα, εἰργάζετο, πρέσβα, ἐπάσαντο, ῥύη.

4. State the different theories as to the composition and preservation of the Homeric Poems; and the grounds upon which the *Odyssey* has been supposed to have had a different author from the *Iliad*.

5. Give a brief abstract of the events recorded in the first four books of the *Odyssey*.

AppendixD.
*Examina-
tion Papers
for Scholar-
ships.*

Translate :—

(A.) HOMER—*Iliad*, vi., 476–502.

" Ζεῦ ἄλλοι τε θεοὶ, δότε δὴ καὶ τόνδε γενέσθαι
παῖδ' ἐμόν, ὡς καὶ ἐγώ περ, ἀριπρεπέα Τρώεσσιν,
ὧδε βίην τ' ἀγαθὸν καὶ Ἰλίου ἶφι ἀνάσσειν·
καί ποτέ τις εἴπησι, πατρός γ' ὅδε πολλὸν ἀμείνων,
ἐκ πολέμου ἀνιόντα· φέροι δ' ἔναρα βροτόεντα   480
κτείνας δήϊον ἄνδρα, χαρείη δὲ φρένα μήτηρ."

"Ὣς εἰπὼν ἀλόχοιο φίλης ἐν χερσὶν ἔθηκεν
παῖδ' ἑόν· ἡ δ' ἄρα μιν κηώδεϊ δέξατο κόλπῳ
δακρυόεν γελάσασα· πόσις δ' ἐλέησε νοήσας,
χειρί τέ μιν κατέρεξεν ἔπος τ' ἔφατ' ἔκ τ' ὀνόμαζεν·   485

" Δαιμονίη, μή μοί τι λίην ἀκαχίζεο θυμῷ·
οὐ γάρ τίς μ' ὑπὲρ αἶσαν ἀνὴρ Ἄϊδι προϊάψει·
μοῖραν δ' οὔτινά φημι πεφυγμένον ἔμμεναι ἀνδρῶν,
οὐ κακὸν, οὐδὲ μὲν ἐσθλόν, ἐπὴν τὰ πρῶτα γένηται.
ἀλλ' εἰς οἶκον ἰοῦσα τὰ σ' αὐτῆς ἔργα κόμιζε,   490
ἱστόν τ' ἠλακάτην τε, καὶ ἀμφιπόλοισι κέλευε
ἔργον ἐποίχεσθαι· πόλεμος δ' ἄνδρεσσι μελήσει
πᾶσιν, ἐμοὶ δὲ μάλιστα, τοὶ Ἰλίῳ ἐγγεγάασιν."

"Ὣς ἄρα φωνήσας κόρυθ' εἵλετο φαίδιμος Ἕκτωρ   495
ἵππουριν· ἄλοχος δὲ φίλη οἶκόνδε βεβήκει
ἐντροπαλιζομένη, θαλερὸν κατὰ δάκρυ χέουσα.
αἶψα δ' ἔπειθ' ἵκανε δόμους εὖ ναιετάοντας
Ἕκτορος ἀνδροφόνοιο, κιχήσατο δ' ἔνδοθι πολλὰς
ἀμφιπόλους, τῇσιν δὲ γόον πάσῃσιν ἐνῶρσεν.   500
αἱ μὲν ἔτι ζωὸν γόον Ἕκτορα ᾧ ἐνὶ οἴκῳ·
οὐ γάρ μιν ἔτ' ἔφαντο ὑπότροπον ἐκ πολέμοιο
ἵξεσθαι, προφυγόντα μένος καὶ χεῖρας Ἀχαιῶν.

1. Parse fully:—ἀκαχίζεο, μελήσει, ἐγγεγάασιν, κιχήσατο, ἐνῶρσεν,
   γόον (v. 500), ἵξεσθαι.
2. Derive :—ἀριπρεπέα, κηώδεϊ, Δαιμονίη, ἵππουριν, ἀμφίπολος.
3. Explain the construction of ἀνιόντα, v. 480 ; and of δακρυόεν, v. 484.
4. Give the forms, in the common dialect, of μιν, τοὶ, τῇσι.

(B.) EURIPIDES—*Phœnissæ*, 1009–1035.

ΜΕ.   ἀλλ' εἶμι καὶ στὰς ἐξ ἐπάλξεων ἄκρων
σφάξας ἐμαυτὸν σηκὸν ἐς μελαμβαθῆ
δράκοντος, ἔνθ' ὁ μάντις ἐξηγήσατο,
ἐλευθερώσω γαῖαν· εἴρηται λόγος.
στείχω δέ, θανάτου δῶρον οὐκ αἰσχρὸν πόλει
δώσω, νόσου δὲ τήνδ' ἀπαλλάξω χθόνα.
εἰ γὰρ λαβὼν ἕκαστος ὅ τι δύναιτο τις
χρηστὸν διέλθοι τοῦτο κἀς κοινὸν φέροι
πατρίδι, κακῶν ἂν αἱ πόλεις ἐλασσόνων
πειρώμεναι τὸ λοιπὸν εὐτυχοῖεν ἄν.

XO. ἰβᾶς ἰβᾶς,   στρ.

ὦ πτερόεσσα, γᾶς λόχευμα
νερτέρων τ' Ἐχίδνας,
Καλυδῶν' ἀγραγά,
πολύστονος πολυφθόρος,
μιζοτάρβνος,
ὅάων τέρας,
φοιτάσι πτερόις
χαλαΐτ' ὡμοείτοις
Διρκαίων ἅ ποτ' ἐκ
τόπων νίους πεδαίρονσ'
ἄλυρον ὁμᾷ μαθαν
ἀλωμένων τ' Ἐρινύν
ἕφερες ἕφερες ἅχεα πατρίδι
φόνια· φόνιος δε θεῶν,
ὅς ταῦτ' ἦν ὁ πράξας.
ἰάλεμοι δε ματέρων,
ἰάλεμοι δε παρθένων
ἐστέναζον οἴκοις.

1. How do you account for the difference of dialects in the two portions of the extract? Point out some of the examples of this difference.

2. What is there remarkable in the construction φοιτάσι πτερόις?

3. Derive ἀλωμάθης, ἄλυρον, χρησμός, ἰάλεμος.

4. Write down the principal tenses of the verbs to which the following forms belong:—εἴρηται, στείχω, ἐφερες, ἐστέναζον.

5. Distinguish between πολύφθορος and πολυφθόρος.

6. Mark the scansion of the first three lines of the extract, naming the feet, and pointing out the principal *caesuras*.

GREEK.—LITERARY SCHOLARSHIPS OF THE FIRST YEAR.

Translate:—

(A.) HERODOTUS, ii., 146.

Τούτων ἃν ἀμφοτέρων πάρεστι χρᾶσθαι τοῖσί τις πείσεται λεγομένοισι μᾶλλον· ἐμοὶ δ' ὦν ἧ περὶ αὐτῶν γνώμη ἀποδέδεκται. εἰ μὲν γὰρ φανεροί τε ἐγένοντο καὶ κατεγήρασαν καὶ οὗτοι ἀν τῇ Ἑλλάδι, κατὰ περ Ἡρακλέης ὁ ἐξ Ἀμφιτρύωνος γενόμενος, καὶ δὴ καὶ Διόνυσος ὁ ἐκ Σεμέλης καὶ Πὰν ὁ ἐκ Πηνελόπης γενόμενος, ἔφη ἃν τις καὶ τούτους ἄλλους γενομένους ἄνδρας ἔχειν τὰ ἐκείνων οὐνόματα τῶν προγεγονότων θεῶν· νῦν δὲ Διόνυσόν τε λέγουσι οἱ Ἕλληνες ὡς αὐτίκα γενόμενον ἐς τὸν μηρὸν ἐνερράψατο Ζεὺς καὶ ἤνεικε ἐς Νύσαν τὴν ὑπὲρ Αἰγύπτου ἐοῦσαν ἐν τῇ Αἰθιοπίη, καὶ Πανός γε πέρι οὐκ ἔχουσι εἰπεῖν δκῃ ἐτράπετο γενόμενος. δῆλα δή μοι γέγονε, ὅτι ὕστερον ἐπύθοντο οἱ Ἕλληνες τούτων τὰ οὐνόματα ἢ τὰ τῶν ἄλλων θεῶν· ἀπ' οὗ δὲ ἐπύθοντο χρόνου, ἀπὸ τούτου γενεηλογέουσι αὐτῶν τὴν γένεσιν.

1. Explain accurately the construction of the first sentence of the extract.

2. Give the common forms of ἀποδέδεκται, ἤνεικε, γενεηλόγεουσι; and write down the principal tenses of πείσεται, κατεγήρασαν, ἐνερράψατο, ἐτράπετο, ἐπύθοντο.

(B.) XENOPHON—*Anabasis*, II, iii, 1, 2.

Ὁ δὲ δὴ ἔγραφε ὅτι βασιλεὺς ἐξελέγη τῇ ἑσπέρᾳ, τῇδε ζῆλον ἄν. τῇ μὲν γὰρ πρόσθεν ἡμέρᾳ πέμψειεν τὰ ὅπλα παραδιδόναι ἐκέλευεν, τότε δὲ ἅμα ἡλίῳ ἀνατέλλοντι κήρυκας ἔπεμψε περὶ σπονδῶν. οἱ δ᾽ ἐπεὶ ἦλθον ὡς τοὺς προφύλακας, ἐζήτουν τοὺς ἄρχοντας. ἐπειδὴ δὲ ἀπήγγειλαν οἱ προφύλακες, Κλέαρχος τυγχάνων τότε τὰς τάξεις ἐπισκοπῶν εἶπε τοῖς προφύλαξι κελεῦσαι τοὺς κήρυκας περιμένειν ἄχρι ἂν σχολάσῃ.

1. Explain σπονδῶν ; and distinguish in meaning between στολῇ and σπονδαῖς.

2. Explain the construction of τυγχάνων and ἐπισκοπῶν.

3. ἂν σχολάσῃ. What is the exact force of this combination of ἂν with the aor. subj., and to what Latin tense does it correspond?

(C.) LUCIAN—*Timon*.

Ὦ Ζεῦ φίλιε, καὶ ξένιε, καὶ ἑταιρεῖε, καὶ ἐφέστιε, καὶ ἀστεροπητὰ, καὶ ὅρκιε, καὶ νεφεληγερέτα, καὶ ἐρίγδουπε, καὶ εἴ τί σε ἄλλο οἱ ἐμβρόντητοι ποιηταὶ καλοῦσι, καὶ μάλιστα ὅταν ἀπορῶσι πρὸς τὰ μέτρα· τότε γὰρ αὐτοὺς πολυώνυμος γινόμενος ὑπερείδεις τὸ πίπτον τοῦ μέτρου, καὶ ἀναπληροῖς τὸ κεχηνὸς τοῦ ῥυθμοῦ· ποῦ σοι νῦν ἡ ἐρισμάραγος ἀστραπή, καὶ ἡ βαρύβρομος βροντή, καὶ ὁ αἰθαλόεις, καὶ ἀργήεις, καὶ σμαραλέος κεραυνός ; ἅπαντα γάρ ταῦτα λῆρος ἤδη ἀναπέφηνε, καὶ καπνὸς ποιητικὸς ἀτεχνῶς, ἔξω τοῦ καταγοῦ τῶν ὀνομάτων.

Derive or decompound the several epithets of Ζεὺς in this extract.

Translate into Greek :—

1. The son of the king transacts the affairs of the state well.
2. The egg was turned into a bird.
3. He rejoiced at the virtue of his children.
4. Let us avoid speaking ill of our friends.
5. The king of the Persians has ravaged the greater part of Attica.
6. He told me that he was vexed at the wickedness of the people.
7. If you manage your affairs well, you will become rich.
8. If the men of the present day were to imitate the actions of their ancestors, they would greatly benefit their country.
9. If the soldiers had fought bravely, they would have conquered the enemy.

GREEK.—LITERARY SCHOLARSHIPS OF THE SECOND YEAR.

Translate :—

THUCYDIDES, i, 124.

Ὥστε πανταχόθεν καλῶς ὑπάρχον ὑμῖν πολεμεῖν καὶ ἡμῶν ταῦτα κοινῇ παραινούντων, εἴπερ βεβαιότατον τὸ ταὐτὰ ξυμφέροντα καὶ πόλεσι καὶ ἰδιώταις εἶναι, μὴ μέλλετε Ποτιδεάταις τε ποιεῖσθαι τιμωρίαν οὖσι Δωριεῦσι καὶ ὑπ᾽ Ἰώνων πολιορκουμένοις, οὗ πρότερον ἦν τοὐναντίον, καὶ τῶν ἄλλων μετελθεῖν τὴν ἐλευθερίαν, ὡς οὐκέτι ἐνδέχεται περιμένοντας τοὺς μὲν ἤδη βλάπτεσθαι, τοὺς δ᾽, εἰ γνωσθησόμεθα ξυνελθόντες μέν, ἀμύνεσθαι δὲ οὐ τολμῶντες, μὴ πολὺ ὕστερον τὸ αὐτὸ πάσχειν· ἀλλὰ νομίσαντες ἐς ἀνάγκην ἀφῖχθαι, ὦ ἄνδρες ξύμμαχοι, καὶ ἅμα τάδε ἄριστα λέγεσθαι, ψηφίσασθε τὸν

πόλεμον, μὴ φοβηθέντες τὸ αὐτίκα δεινόν, τῆς δ᾿ ἀπ᾿ αὐτοῦ διὰ πλείονος εἰρήνης ἐπιθυμήσαντες· ἐς πόλεμον μὲν γὰρ εἰρήνη μᾶλλον βεβαιοῦται, ἀφ᾿ ἡσυχίας δὲ μὴ πολεμῆσαι οὐχ ὁμοίως ἀκίνδυνον. καὶ τὴν καθεστηκυῖαν τῇ Ἑλλάδι πόλιν τύραννον ἡγησάμενοι ἐπὶ πᾶσιν ὁμοίως καθεστάναι, ὥστε τῶν μὲν ἤδη ἄρχειν, τῶν δὲ διανοεῖσθαι, παραστησάμεθα δὲ αὐτοὶ ἀκινδύνως τὸ λοιπὸν οἰκῶμεν καὶ τοὺς νῦν δεδουλωμένους Ἕλληνας ἐλευθερώσομεν.

1. Do τάξε and ταῦτα refer to the same thing in the first sentence of the extract? What variant has been suggested for the latter word?

2. Supply the ellipsis in γὰρ βεβαίωται κ. τ. λ.

3. What is the subject of ἄρχειν?

4. ἐς πόλεμον—ἀφ᾿ ἡσυχίας. Point out the distinction between ἐς and ἀπό in these phrases.

5. In what peculiar way is ὥστε used, in ὥστε ἄρχειν?

6. Express the following sentences in the language of Thucydides.

(a.) They cultivated their own land, so far as to get a living from it.

(b.) Aguaemenon, in my opinion, collected the armament, because he surpassed his contemporaries in power, and not so much because he took with him the suitors of Helen who were bound by their oath to Tyndarus.

(c.) Harmodius and Aristogeiton having had some suspicion that on that day, and at that moment, a disclosure had been made by one of their accomplices to Hippias, held aloof from him as forewarned, and yet wishing to accomplish something before they were seized, and then run the risk, on encountering Hipparchus near the so-called Leocorion, as he was arranging the Panathenaic procession, they slew him.

GREEK.—SENIOR (LITERARY) SCHOLARSHIP.

Translate:—

(A.) ARISTOTLE—*Nicomachean Ethics*, iii. 15.

ἐπειδὴ δὲ μᾶλλον ἴσμεν ἡ ἀκολασία τῆς δειλίας, ἡ δὲ διὰ πλοῦτος, ὧν σὺ μὲν αἱρετή, σὺ δὲ φευκτόν. καὶ ἡ μὲν λύπη ἐξίστησι καὶ φθείρει τὴν τοῦ ἔχοντος φύσιν, ἡ δὲ ἡδονὴ τοιοῦτο οὐδὲν ποιεῖ· διὸ καὶ ἑκουσιώτερον. καὶ γὰρ εὐονειδιστότερον· καὶ γὰρ ἐθισθῆναι ῥᾷον αὐτὰ· πολλὰ γὰρ ἐν τῷ βίῳ τὰ τοιαῦτα καὶ οἱ ἐθισμοὶ ἀκίνδυνοι, ἐπὶ δὲ τῶν φοβερῶν ἀνάπαλιν. δόξειε δ᾿ ἂν οὐχ ὁμοίως ἑκούσιον ἡ δειλία εἶναι τοῖς καθ᾿ ἕκαστον αὐτῆς· αὐτὴ μὲν γὰρ ἄλυπος, ταῦτα δὲ διὰ λύπην ἐξίστησιν, ὥστε καὶ τὰ ὅπλα ῥίπτειν καὶ τἆλλα ἀσχημονεῖν· διὸ καὶ δοκεῖ βίαια εἶναι. τῷ δ᾿ ἀκολάστῳ ἀνάπαλιν τὰ μὲν καθ᾿ ἕκαστα ἑκούσια, ἐπιθυμοῦντι γὰρ καὶ ὀρεγομένῳ, τὸ δ᾿ ὅλον ἧττον· οὐθεὶς γὰρ ἐπιθυμεῖ ἀκόλαστος εἶναι. τὸ δ᾿ ὄνομα τῆς ἀκολασίας καὶ ἐπὶ τὰς παιδικὰς ἁμαρτίας φέρομεν· ἔχουσι γάρ τινα ὁμοιότητα. πότερον δ᾿ ἀπὸ ποτέρου καλεῖται, οὐθὲν πρὸς τὰ νῦν διαφέρει, δῆλον δ᾿ ὅτι τὸ ὕστερον ἀπὸ τοῦ προτέρου. οὐ κακῶς δ᾿ ἔοικε μετενηνέχθαι· κεκολάσθαι γὰρ δεῖ τὸ τῶν αἰσχρῶν ὀρεγόμενον καὶ πολλὴν αὔξησιν ἔχον, τοιοῦτον δὲ μάλιστα ἡ ἐπιθυμία καὶ ὁ παῖς· κατ᾿ ἐπιθυμίαν γὰρ ζῶσι καὶ τὰ παιδία, καὶ μάλιστα ἐν τούτοις ἡ τοῦ ἡδέος ὄρεξις· εἰ οὖν μὴ ἔσται εὐπειθὲς καὶ ὑπὸ τὸ ἄρχον, ἐπὶ πολὺ ἥξει· ἄπληστος γὰρ ἡ τοῦ ἡδέος ὄρεξις καὶ πανταχόθεν τῷ ἀνοήτῳ, καὶ ἡ τῆς ἐπιθυμίας ἐνέργεια αὔξει τὸ συγγενές, κἂν μεγάλαι καὶ σφοδραὶ ὦσι, καὶ τὸν λογισμὸν ἐκκρούουσι. διὸ δεῖ μετρίας εἶναι αὐτὰς καὶ ὀλίγας, καὶ τῷ λόγῳ μηθὲν ἐναντιοῦσθαι. τὸ δὲ τοιοῦτον εὐπειθὲς λέγομεν καὶ κεκολασμένον· ὥσπερ γὰρ τὸν παῖδα δεῖ κατὰ τὸ πρόσταγμα τοῦ παιδαγωγοῦ ζῆν, οὕτω καὶ τὸ ἐπιθυμητικὸν κατὰ τὸν λόγον. διὸ δεῖ τοῦ σώφρονος τὸ ἐπιθυμητικὸν συμφωνεῖν τῷ λόγῳ· σκοπὸς γὰρ ἀμφοῖν τὸ καλόν, καὶ ἐπιθυμεῖ ὁ σώφρων ὧν δεῖ καὶ ὡς δεῖ καὶ ὅτε· οὕτω δὲ τάττει καὶ ὁ

1. What are the conditions of εὐδαιμονία, according to Aristotle?

2. What is the distinction which he makes between intellectual (διανοητικαί) and moral (ἠθικαί) virtues, as to their acquisition?

(B.) EURIPIDES—*Bacchae*, vv. 1040–1061.

ΑΓ. ἐμαρψα τόνδ' ἄνευ βρόχων
       · · · · νέον λὶν,
       ὡς ὁρᾶν πάρα.

ΧΟ. πόθεν ἐρημίας;

ΑΓ. Κιθαιρὼν ΧΟ. τί Κιθαιρών;

ΧΟ. κατηρέσατόν νιν·

ΑΓ. τίς ἁ βαλοῦσα πρώτα; ΑΓ. ἐμὸν τὸ γέρας·
       'μάκαιρ' Ἀγαύη' κληζόμεθ' ἐν θιάσοις.

ΧΟ. τίς ἄλλα; ΑΓ. τὰ Κάδμου ΧΟ. τί Κάδμου; ΑΓ. γένεθλα
       μετ' ἐμὲ μετ' ἐμὲ τοῦδ'
       ἔθιγε θηρός. εὐτυχής γ' ἥδ' ἄγρα.
       μέτεχέ νυν θοίνας. ΧΟ. τί μετέχω τλᾶμον ;

ΑΓ. νέος ὁ μόσχος ἄρ-
       τι γένυν ὑπὸ κόρυθ' ἁπαλότριχα
       κατάκομον φύλλον.

ΧΟ. πρέπει γὰρ ὥστε θηρὸς ἀγρώλου φόβᾳ.

ΑΓ. ὁ Βάκχιος κυναγέτας
       σοφὸς σοφῶς ἀνέπηλεν ἐπὶ θῆρα
       τόνδε Μαινάδας.

ΧΟ. ὁ γὰρ ἄναξ ἀγρεύς.

ΑΓ. ἐπαινεῖς; ΧΟ. τί δ' ἐπαινῶ;

ΑΓ. τάχα δὲ Καδμεῖοι

ΧΟ. καὶ παῖς γε Πενθεὺς ματέρ'· ΑΓ. ἐπαινέσεται,
       λαβοῦσαν ἄγραν τάνδε λεοντοφνῆ

ΧΟ. περισσάν. ΑΓ. περισσῶς. ΧΟ. ἀγάλλῃ; ΑΓ. γέγηθα
       μεγάλα μεγάλα καὶ
       φανερὰ τᾷδ' ἄγρᾳ κατειργασμένα.

J. RYALL, *Professor.*

LATIN.—FIRST YEAR'S SCHOLARSHIPS, 1871.

1. Describe accurately the situation of Tibur, Aricia, Philippi, Mantua, and Brundusium.

2. State the chief rules for the hexameter verse, and give examples of some exceptions.

3. Derive the words *impero, afficium, manifestus, sesquipedalis,* and *oppidum.*

4. Give the dates of the arrival of Pyrrhus in Italy, the beginning of the first Punic war, and the death of Julius Cæsar.

5. What are the perfects and supines of *sancio, vincio, iacio, delco, torqueo,* and *gigno?*

Re-translate into Latin :—

When I look upon you, Brutus, I am grieved to see your youth running, as it were, in full career through the midst of glory, stopped short by the wretched fate of your country. This grief sits heavy upon me and on our anxious friend Atticus, the partner of my affection and good opinion of you; we heartily wish you well; wish to see you reap the fruit of your virtue; and to live in a Republic that may give you the opportunity not only to revive, but to increase the honour and memory of the two noble families from which you descend.

LATIN.—SCHOLARSHIPS OF THE SECOND AND THIRD YEARS, 1871.

Translato:—

CICERO—*Tusculan Disputations*, i., 25.

Quorsus igitur haec spectat oratio ? Quae sit illa vis et rude sit, in-telligendum puto. Non est certe nec cordis nec sanguinis nec cerebri nec atomorum: anima sit ignisne nescio, nec me pudet, ut istos, fateri nescire quod nesciam: illud, si ulla alia de re obscura adfirmare possem, sive anima sive ignis sit animus, eum iurarem esse divinum. Quid enim? obscuro te, terrane tibi hoc nebuloso et caliginoso caelo nati sata aut concreta videtur tanta vis memoriae ? Si quid sit hoc non vides, at quale sit vides : si ne id quidem, at quantum sit profecto vides.

Translate into Latin Elegiacs :—

> On what foundation stands the warrior's pride,
> How just his hopes let Swedish Charles decide ;
> A frame of adamant, a soul of fire,
> No dangers fright him, and no labours tire ;
> O'er love, o'er fear, extends his wide domain,
> Unconquer'd lord of pleasure and of pain ;
> No joys to him pacific sceptres yield,
> War sounds the trump, he rushes to the field ;
> Behold, surrounding kings their pow'r combine,
> And one capitulate, and one resign.

Translate into Latin prose :—

Truth is always consistent with itself, and needs nothing to help it out ; it is always near at hand, and sits upon our lips, and is ready to drop out before we are aware ; whereas a lie is troublesome, and sets a man's invention upon the rack, and one trick needs a great many more to make it good. It is like building upon a false foundation, which constantly stands in need of props to shore it up, and proves at last more chargeable than to have raised a substantial building at first upon a true and solid foundation ; for sincerity is firm and substantial, and there is nothing hollow and unsound in it, and because it is plain and open, fears no discovery.

LATIN.—SENIOR SCHOLARSHIPS, 1871.

SUBJECT FOR A LATIN ESSAY.

> "At vestri proavi Plautinos et numeros et
> Laudavere sales ; nimium patienter utrumque,
> Ne dicam stulte, mirati."

HORACE—*Ars Poetica*.

Translate into Latin verse:—

> The moon is up, and yet it is not night—
> Sunset divides the sky with her—a sea
> Of glory streams along the Alpine height
> Of blue Friuli's mountains; Heaven is free
> From clouds, but of all colours seems to be
> Melted to one vast Iris of the west,
> Where the day joins the past eternity;
> While, on the other hand, meek Dian's crest
> Floats through the azure air—an island of the blest!

B. LEWIS, *Professor.*

MODERN LANGUAGES.

Translate into French, or German, or Italian :—

The sermons however of Bossuet, taken generally, are not reckoned in the highest class of his numerous writings ; perhaps scarcely justice has been done to them. His genius, on the other hand, by universal confession, never shone higher than in the six which bear the name of Oraisons Funèbres. They belong in substance so much more naturally to the province of eloquence than of theology, that I should have reserved them for another place, if the separation would not have seemed rather unexpected to the reader. Few works of genius perhaps in the French language are better known, or have been more prodigally extolled. In that style of eloquence which the ancients called demonstrative, or rather descriptive, the style of panegyric or commemoration, they are doubtless superior to those justly celebrated productions of Thucydides and Plato that have descended to us from Greece ; nor has Bossuet been equalled by any later writer. Those on the Queen of England, on her daughter the Duchess of Orleans, and on the Prince of Condé, victims of war, are the finest. If a difference is to be made among these, we might perhaps, after some hesitation, confer the palm on the first. The range of topics is so various, the thoughts so just, the images so noble and poetical, the whole is in such perfect keeping, the tone of awful contemplation is so uniform, that if it has not any passages of such extraordinary beauty as occur in the other two, its general effect on the mind is more irresistible.—HALLAM.

1. State the use of the Imperfect and of the Preterite in French, comparing it with the Latin, and illustrate it by examples.
2. Explain what is understood by Classical and Romantic Literature.
3. Who were the Trouvères and the Troubadours ?
4. What was the most brilliant epoch of French Literature ?
5. State what you know of *Port Royal.*
6. Say what is understood in the History of Literature by the word Renaissance.
7. Mention and characterize the principal works of Schiller.
8. Mention the most brilliant period in the history of Italian Literature.

METAPHYSICS.

1. How far is Modern Philosophy indebted to the labours of Bacon and Des Cartes respectively ?
2. How far do Spinoza and Berkeley resemble and differ from each other ?
3. Is the distinction between "Absolute" and "Relative" Sceptics sound ? If so, in which class would you place Hume ?
4. What is the peculiar position assigned to the Idea of Time in Kant's system ?
5. Explain Reid's doctrine of "Natural Signs." How far is it consistent with "Natural Realism," as explained by Sir W. Hamilton ?
6. What are Reid's criteria of First Principles ? Discuss them, and examine his application of them.
7. Can consciousness exist without memory ? Give Sir W. Hamilton's opinion. Is he always consistent upon the point ?
8. Explain briefly the "Conservative," "Reproductive," and "Representative" faculties. Discuss the distinction.

9. Give the law of Inseparable Association as explained by James Mill, and mention some mental phenomena which he endeavours to solve by it. Is his solution satisfactory?

10. In how many senses, according to J. S. Mill, does Hamilton use the word "inconceivable" in his discussion of the Philosophy of the Conditioned? In how many of them is it true that an inconceivable proposition must be false?

11. How does the existence of a fixed order in our sensations affect our belief in an external world, according to Mill?

12. Explain and criticise any of the more modern theories of Innate Ideas with which you may be acquainted.

G. S. READ, *Professor.*

POLITICAL ECONOMY.

1. Explain the circumstances which regulate the general rate of wages, showing how they are affected—

    1st. By combination and strikes;

    2nd. By the introduction of machinery;

    3rd. By an extensive emigration from a country in which all the labourers could find employment.

2. Explain the circumstances which regulate the general rate of profit, and the way in which they respectively act.

3. State the objections made by Mill and by Tooke to the Bank Act, and state the system by which, according to them, the currency should be regulated.

4. Explain the views of Tooke and Mill respectively as to the power of a banker to increase his issues (previous to the Bank Act), and your own views on this subject.

5. Explain Mill's view of the "double action of a drain," and your opinion on this subject.

6. Explain the action of the several circumstances which affect the Exchanges, showing how they are influenced by the greater or less length at which the bills are drawn.

7. Explain the circumstances which determine the general rate of interest, showing—

    1st. Whether it has any, and what relation to the quantity of money; or if none such, why not?

    2nd. What relation it bears to the prices of land and of funded property.

R. H. MILLS, *Professor.*

SCHOLARSHIPS OF SECOND YEAR.

1. The rectangle under two sides of a triangle is equal to the rectangle under the radius of the circumscribing circle, and the perpendicular from the vertex on the base.

2. P is the intersection of the perpendiculars from the angles on the sides of a triangle ABC of which AB, AC are equal, and AP meets BC in D; show that $AD : PD :: AB^2 : PB^2$.

3. Find the locus of a point, such that the squares of its distances from two given points may have a constant difference.

4. If $\dfrac{1}{a} + \dfrac{1}{b} + \dfrac{1}{c} = 0$, prove that $(x + y + z)^3 = x^3 + y^3 + z^3 - 3xyz$, and thence show that—

$$\left(\frac{1}{a - b} + \frac{1}{b - c} + \frac{1}{c - a}\right)^3 = \frac{1}{(a - b)^3} + \frac{1}{(b - c)^3} + \frac{1}{(c - a)^3} - \frac{3}{(a - b)(b - c)(c - a)}$$

4. Prove the binomial theorem for a positive integral index.

5. Express as a determinant the product of the two determinants,

$$\begin{vmatrix} a, & \beta \\ c, & \delta \end{vmatrix}, \quad \begin{vmatrix} a, & \beta \\ \gamma, & \delta \end{vmatrix}.$$

6. Sum the series—

(1.) $1 + \dfrac{1}{\underline{2}} + \dfrac{1}{\underline{4}} + \ldots$ to ∞.

(2.) $\dfrac{1}{1 \cdot 4} + \dfrac{1}{4 \cdot 7} + \dfrac{1}{7 \cdot 10} + \ldots$ to n terms.

7. Determine formulæ for solving a triangle in which are given two sides and the included angle.

If $x \cos a + x' \sin a = 1$, $x \cos \beta + x' \sin \beta = 1$, $y \cos \gamma + y' \sin \gamma = 1$ $y \cos \delta + y' \sin \delta = 1$, show that $\dfrac{1-x}{1+x} \cdot \dfrac{1-y}{1+y} = \tan \dfrac{a}{2} \tan \dfrac{\beta}{2} \tan \dfrac{\gamma}{2} \tan \dfrac{\delta}{2}$.

8. Given sin A, find sin $\dfrac{A}{2}$ and show how to determine the ambiguity.

If $\tan \overline{x + a} \cot^2 x = 1$, show that $3 \sin 4x + a \sin 4x + a = 0$.

9. Prove that imaginary and irrational roots of equations occur in pairs.

If a, β, γ be the roots of the equation $x^3 + px^2 + qm = 0$, find the sum of the cubes and of the inverse squares of a, β, γ.

10. Find the length of the perpendicular from a point whose co-ordinates are given on a straight line whose equation is given.

11. The quadrilateral whose sides are $x + ay = 0$, $y + bx = 0$, $x + ay + 1 = 0$, $y + bx + 2 = 0$ is a parallelogram. Show this and find its area.

12. Find the equation to the normal to a parabola at any point upon the curve.

Determine the length between the curve of the normal to a parabola through the extremity of the latus rectum.

* Candidates for the engineering scholarships of the second year will substitute for 10, 11, 12 of above the following.

10.* Prove that two sides of a spherical triangle are together greater than the third.* On what proposition in Euclid does this depend?

11.* Express the cosine of half the angle of a spherical triangle in terms of the sides.

Prove that $\tan a = \dfrac{\tan \delta \cos U + \tan s \cos B}{1 - \tan b \tan s \cos B \cos U}$.

Deduce from this the corresponding theorem in plane trigonometry.

For question 5 may be substituted—

5'. Given the expansion in powers of x of e^x, find that of $\log_e (1 + x)$.

Or 5″. Find the relations which exist between the Arithmetic, Geometric, and Harmonic means of two given quantities.

First Year's Mathematical Scholarships.

1. If two triangles have two sides equal in each, but the included angles unequal, prove that the third side of that which has the greater angle is greater than the third side of the other.

Show that the difference of the two remaining angles is greater in the latter case than in the former.

2. Show that lines which touch a circle are at right angles to the radius through the point of contact.

3. Round the four triangles into which a quadrilateral inscribed in a circle is divided by its diagonals are drawn four circles, prove that the four tangents at the common point are parallel to the sides of the quadrilateral.

4. A person invests £450 in 3 per cents. at $93\frac{1}{2}$, £350 in 6 per cents. at 104, and £450 in 3 per cents. at $55\frac{1}{2}$, what interest per cent. has he on the whole for his money?

5. Prove the identity $(x^2 - yz)(y^2 - zx) + (z^2 - xy)(x^2 - yz) + (x^2 - xy)(y^2 + yz + zx)^2 = zyz(x + y + z)^3$.

6. Reduce to its simplest form—

$$\left(y + \dfrac{x - \dfrac{2y}{1 - y^2}}{1 + \dfrac{2xy}{1 - y^2}}\right) \div \left(1 - \dfrac{y\left(x - \dfrac{2y}{1 - y^2}\right)}{1 + \dfrac{2xy}{1 - y^2}}\right)$$

and add together these—

$$\frac{1}{(mn+1)(mm+m+1)} + \frac{1}{(mm+m+1)(mn+2m+1)} + \frac{1}{(mn+2m+1)(mm+3m+1)}$$

7. Solve the equations:

1° $\dfrac{x+2}{x-1} + \dfrac{x+2}{x+1} = 1\frac{1}{3}$.

2° $(x-2)(x+1)(x+2)(x+5) = 160$.

8. Define a surd, and show that it cannot be equal to the sum of a rational quantity and a surd.

Find $\dfrac{y + \sqrt{1-x}}{y - \sqrt{1+x}} + \dfrac{3\sqrt{2} - \sqrt{1+x}}{y - \sqrt{1-x}}$, when $x = \dfrac{\sqrt{3}}{2}$, $y = 3\sqrt{2}$.

9. If x, y, z, a be in G, P, and a, b, c, d in A, P, prove that $x^b u^c = y^a z^d$.

10. Determine the functions of the supplement of an angle in terms of the functions of the angle, stating the principle used in defining the former.

Find all the functions of 2550°.

11. Prove (geometrically, if possible) that $\tan 2\theta = \dfrac{2\tan\theta}{1 - \tan^2\theta}$.

If $\cot^2 a \cdot \tan(a+a) = 1$, show that $\sin(4a+a) + 3\sin a = 0$.

12. Prove the formula $c = a \cos B + b \cos A$.

Deduce $\cos A$ in terms of the sides a b c.

13. Solve these—

$$\begin{array}{c} \dfrac{x+2}{2x-1} + \dfrac{2x+3}{x+5} = 3 \\[2mm] y = \dfrac{1}{3}x = \dfrac{1}{2} \qquad 4y - \dfrac{x}{2} = 1\dfrac{1}{11} \end{array}\Bigg\}$$

$$\left.\begin{array}{c} x + 3y = 1\frac{1}{2} \end{array}\right\}$$

14. Sum these sines—

$-\dfrac{1}{3} + 1 + \dfrac{5}{3} + x$ to n terms

$\dfrac{1}{2} - \dfrac{1}{3} + \dfrac{2}{9} - \&c.$ to ∞.

ENGINEERING SCHOLARSHIP OF THIRD YEAR.

1. Prove that the areas of similar triangles are in the duplicate ratio of their homologous sides.

2. Find the expansion of $\log_e(1+x)$.

3. Find $\cos \frac{A}{2}$ in terms of $\sin A$, showing how to determine the ambiguous signs.

If $x \cos \alpha + x' \cos \alpha_1 = 1$, $x \cos \beta + x' \cos \beta_1 = 1$

$y \cos \gamma + y' \sin \gamma = 1$, $y \cos \delta + y' \sin \delta_1 = 1$, prove that

$$\frac{1-y}{1+y} \cdot \frac{1-x}{1+x} = \tan \frac{\beta}{2} \cdot \tan \frac{\gamma}{2} \cdot \tan \frac{\delta}{2}.$$

4. State Legendre's theorem for approximating to the angles of a nearly plane spherical triangle, whose sides are given.

5. Prove that the portion of the tangent to a hyperbola between the asymptotes is bisected at the point of contact.

Determine the equations to the tangents to the ordinary and conjugate hyperbolas which pass through the foci of the other; and show that if they be at right angles the hyperbolas must be rectangular.

6. Transfer in the variables from x to y in $\frac{du}{dx}$, $\frac{d^2u}{dx^2}$, there being a given relation between x and y.

Ex. If $x = \cos^n y$, show that $\frac{d^2u}{dx^2} + \cot u \frac{du}{dx} = \frac{d}{dy}\left\{ \sqrt{1-y \frac{du}{dy}} \right\}$.

7. Find the equation to the normal to a plane curve through any point on it, (1) in rectangular (2) in polar co-ordinates.

8. Find the polar equation to the normal to $r = a \, e^{\theta \cot a}$ at any point.

Show that if it passes through the point (c, β), the point where the normal meets the curve lies on the circle $r \cos a = c \cos (\theta - \beta - a)$.

9. What is meant by the envelope of a series of plane curves, and show how to find it.

Prove that the envelope of the circles referred to in last problem by varying a is the circle $r = c$.

10. Prove the proposition on which the transformation of integrals depends.

Find the integrals $\int \frac{dx}{a^3 + x^3}$, $\int \frac{x+a}{(x^2 + a^2)^{\frac{3}{2}}} \, dx$.

11. Determine, ab initio, an expression for the length of a given curve between any two given points.

Find thence the whole length of the curve $y = \sqrt{2ax - x^2}$.

CHEMISTRY.—SCHOLARSHIPS OF THE SECOND YEAR IN MEDICINE AND IN ENGINEERING.

1. Illustrate the atomicity of elements in the union of hydrogen with chlorine, oxygen, nitrogen, and carbon.

2. Define monobasic and polybasic acids. Give examples, and write out in symbols the neutral and acid salts capable of being formed by each with the hydrates of sodium, calcium, and aluminium.

3. Hydrated sulphuric acid acts on 100 grains of magnesium carbonate; how many grains of crystallised magnesium sulphate will be formed?

Mg.=24 magnesium sulphate crystallises with $7H_2O$.

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4. Prepare metallic magnesium; mention some of its characteristic chemical properties.

5. Carbonic dioxide, carbonic monoxide, and nitrogen are in the same mixture; how would you separate them from each other?

6. Sulphuretted hydrogen is passed into an acid mixture containing cadmium and arsenious acid; give the formulæ of the compounds formed. In what respect do they resemble each other? How would you distinguish them?

7. Prepare carbonate of lead as a pigment. How would you detect its adulteration with barytic sulphate?

8. Give the formula and the modes of preparation of the two oxides of copper. What is the best test of the salts of copper?

9. How would you detect the presence of nitrogen in organic bodies?

10. Prepare a primary monamine.

11. How would you ascertain the molecular formula of a volatile organic acid, after calculating its empirical formula from its per-centage composition?

12. Write out in symbols the action of oil of vitriol on oxalic and on formic acids.

CHEMISTRY.—SENIOR SCHOLARSHIPS IN ARTS OF THE FOURTH YEAR.

1. Analyse a mixture consisting of the following gases :—Carbonic oxide, carbonic acid, oxygen, marsh gas, and olefiant gas.

2. In the metallurgy of silver by the American and the German methods, the silver is converted into chloride, and then reduced ; mention the agents employed in each case.

3. Prepare a solution of hydrate of baryta from the insoluble sulphate.

4. A ferrous and a ferric salt are present in the same solution, how would you separate them so as to estimate the amount of oxide present in each case?

5. What is the natural compound from which the chromium salts are derived? Prepare red chromate of potassium. Explain the action of sulphide of ammonium on chromate of potassium, and on salts of alumina.

6. Describe the following compound figure, and mention the dominant form :—

$$\begin{cases} a : \infty \, a : \infty \, a \\ \infty \, a : \quad a : \quad a \\ \infty \, a : \quad \infty \, a : \infty \, a \end{cases}$$
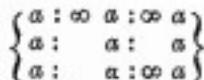
7. The combustion of a volatile organic body containing no nitrogen gives the following per-centage composition :—

C=61·01
H=11·90
O=27·09
                    ——————
                    100·00

Calculate its empirical formula ; correct this formula by the experimental density which is found to be 59·8 ; give the true molecular formula.

8. Define primary, secondary, and tertiary alcohols ; what is the essential difference between a primary and a secondary alcohol ?

9. State some of the methods by which the molecular weight of an organic alkaloid is ascertained.

10. Explain the action of potassium hydrate on the cyanides of the alcohol radicals.

11. Give a general process for preparing the glycols. Contrast the derivatives of these bodies and of the monatomic alcohols.

12. What is the constitution of acrolein? how is it obtained?

<div align="right">J. BLYTH, <i>Professor.</i></div>

<div align="right"><i>Appendix D.</i>
Examination Papers for Scholarships.</div>

GEOLOGY AND MINERALOGY.—THIRD YEAR'S ENGINEERING SCHOLARSHIP.

1. Where in Ireland have we the largest area of granite, and of what minerals is this granite composed?

2. What are the rocks which compose the Doleritic series?

3. Where in the British Isles are the Cambrian rocks represented, and of what are they composed?

4. What is the age, and what are the characteristic fossils, of the limestone of the Chain of Kildare?

5. What is the nature of the basement beds of the Old Red Sandstone of the S.E. of Ireland?

6. What is the position, and what are the fossils of the Coomhola grits?

7. What form of fossil is most abundant in coal-floors, and for what purposes are these floors largely worked?

8. What is the position of the Elavis slate?

9. In what respect does Dolomite differ from Calcite?

10. What is the crystalline form and composition of Hornblend; and in what rocks is it most abundant?

GEOLOGY.—SENIOR SCHOLARSHIP OF NATURAL SCIENCE.

1. What is the composition of the rocks known as Trachy-dolerites?

2. Name the several kinds of metamorphic rocks, and the localities of their occurrence in Ireland.

3. In what respect do the Laurentian and the Labradorian rocks differ?

4. What is the position of the Potsdam Sandstone?

5. Where in Ireland are the Upper Silurians seen? and name some of their fossil contents.

6. What is the position, and what are the characteristic fossils, of the Cypridina Schieffer?

7. What forms of fossil amphibia have the Carboniferous strata afforded?

8. Name some of the characteristic plants of the Permians?

9. What is the position and the nature of the Remfield beds?

10. What is the evidence upon which the Basalts and the associated Igneous rocks of Antrim and the Inner Hebrides, have been referred to the Miocene age?

<div align="right">ROBERT HARKNESS, <i>Professor.</i></div>

ZOOLOGY AND BOTANY.—MEDICAL SCHOLARSHIP.

1. Define, briefly, the order Marsupialia.

2. Name, without comment, those orders of mammals which belong to the native fauna of Britain.

3. Give a brief definition of the order Coleoptera, under the heads of (a) oral organs, (b) wings, and (c) metamorphoses.

<div align="right">F 2</div>

<div style="float:left">Appendix D.

Examination Papers for Scholarships.</div>

4. Name the three largest orders of flowering plants, and refer them to their places in the system.

5. What British order of gamopetalous plants is indicated by the subjoined diagnosis :—*Calyx* 4–5 merous; *corolla* hypogynous, irregular; *stamens* 4, rarely 2 or 5, epipetalous; *ovary* 2-celled; *ovules* indefinite ?

6. What is meant by a *parietal* placenta ? In what British orders of *Thalamiflora* is such a placenta found ?

<div style="text-align:right">J. REAY GREENE, B.A., M.D., *Professor.*</div>

NATURAL PHILOSOPHY.—MEDICAL SCHOLARSHIP.—SECOND YEAR.

1. What is meant by the work done by a force ? Show that the amount of work done in moving a body up an inclined plane is equal to that done in raising it through the vertical height of the plane.

2. What is meant by the composition of velocities, and give some examples to illustrate its truth ?

3. What are the conditions of equilibrium of a floating body ?

4. What is the range of the mercurial thermometer ?

5. Define latent heat ; how is the latent heat of steam ascertained ?

6. How does the number of vibrations of a strained cord depend on its length and on its tension ?

7. A Leyden jar is charged with electricity, a person then holding another jar by the outer coating touches its knob to that of the former, what will then be the nature of the charges in each jar ?

8. Describe the machine by which galvanic currents are produced from an ordinary magnet.

9. When does a concave reflector form a real, and when a vertical image of an object presented to it ?

10. What are the conditions to be fulfilled by two lenses in order that they should be achromatise ?

<div style="text-align:right">JOHN ENGLAND, *Professor.*</div>

SENIOR SCHOLARSHIP IN NATURAL HISTORY.

ZOÖLOGY.

1. Describe the molar teeth of the elephant, as to their number, position, and succession.

2. Give a concise account of the different kinds of placenta found in the ungulate mammals.

3. Define the order *Ratitæ.*

4. In what reptiles is a sacrum wanting ?

5. Briefly contrast *Amphioxus* with other *Vertebrata.*

6. Define the *Strepsiptera.*

7. Contrast the *Merostomata* with other *Crustacea.*

8. Compare the typical star-fishes with the "sand-stars."

9. Describe the nervous system of the *Lamelli-branchiata.*

10. Explain the structure of the common fresh-water sponge (*Spongilla*).

BOTANY.

1. Give some account of the spore-fruit, sexual organs and development of *Selaginella.*

2. In what British orders of Monocotyledons is the perianth often reduced or wanting ?

3. Describe minutely the female flower and inflorescence of the yew.

4. Describe the ovary, ovule, and seed of the *Compositæ*.

5. From the accompanying list of the cohorts and orders of polypetalous plants erase the names of those which, with few or no exceptions, have an inferior ovary.

J. REAY GREENE, B.A., M.D., *Professor.*

POLYPETALÆ.

Series 1, **Thalamifloræ.**	Series 2, **Discifloræ.**
RANALES.	GERANIALES.
*Ranunculaceæ.	*Lineæ. }
Dilleniaceæ. }	Humiriaceæ. }
Calycanthaceæ. }	Malpighiaceæ. }
Magnoliaceæ. }	Zygophylleæ. }
Anonaceæ. }	*Geraniaceæ. }
Menispermaceæ. }	Rutaceæ. }
*Berberideæ. }	Simarubeæ. }
	Ochnaceæ. }
*Nymphæaceæ.	Burseraceæ. }
	Meliaceæ. }
PARIETALES.	Chailletiaceæ. }
Sarraceniaceæ. }	
*Papaveraceæ. }	OLACALES.
*Fumariaceæ. }	Olacineæ. }
*Cruciferæ. }	*Ilicineæ. }
Capparideæ. }	*Empetraceæ. }
*Resedaceæ. }	
*Cistineæ. }	CELASTRALES.
*Violaceæ. }	Stackhousieæ. }
Canellaceæ. }	*Rhamneæ. }
Bixineæ. }	Ampelideæ. }
	*Celastrineæ. }
POLYGALINÆ.	
Pittosporeæ. }	SAPINDALES.
Tremandreæ. }	*Sapindaceæ. }
*Polygaleæ. }	Sabiaceæ. }
Vochysiaceæ. }	Anacardiaceæ. }
CARYOPHYLLINÆ.	(ANOMALA.)
*Frankeniaceæ. }	Coriarieæ. }
*Caryophylleæ. }	Moringeæ. }
*Portulaceæ. }	
*Tamariscineæ. }	Series 3, **Calycifloræ.**
	ROSALES.
GUTTIFERALES.	Connaraceæ. }
*Elatineæ. }	*Leguminosæ. }
*Hypericineæ. }	*Rosaceæ. }
Guttiferæ. }	*Saxifrageæ. }
Ternstroemiaceæ. }	*Crassulaceæ. }
Dipterocarpeæ. }	*Droseraceæ. }
Ochnaceæ. }	
	Hamamelideæ. }
MALVALES.	Bruniaceæ. }
*Tiliaceæ. }	
Sterculiaceæ. }	*Halorageæ. }
*Malvaceæ. }	

Appendix D.
Examination Papers for Scholarships.

Calyciflorœ, continued.

MYRTALES.
Rhizophoreæ.
Combretaceæ.
Myrtaceæ.
Melastomaceæ.
*Lythraceæ.
*Onagrarieæ.

PASSIFLORALES.
Samydaceæ.
Loaseæ.
*Turneraceæ.
Passifloreæ.

Calyciflorœ, continued.

*Cucurbitaceæ.
Begoniaceæ.
Datisceæ.

FICOIDALES.
Cacteæ.

Ficoideæ.

UMBELLALES.
*Umbelliferæ.
*Araliaceæ.
*Corneæ.

ENGINEERING SCHOLARSHIP—THIRD YEAR.

1. Find the centre of gravity of a triangular pyramid.

2. A solid cone, having a base of given radius, stands upon a plane inclined at an angle of 30° to the horizon, and is prevented from sliding; determine its height so that it may just not fall over.

3. A weight of 10 lbs. is attached to one end of a string; find the weight which must be attached to the other, in order that when the system is suspended from a fixed pulley, the accelerating force may be half that of gravity.

4. P draws Q up a given inclined plane by means of a string and pulley, P pulling vertically; where is Q when its position is such that the string being cut, it will just reach the top of the plane?

5. Describe the weight thermometer, and the method of using it.

6. A gas at temperature t_0°, and pressure f, has a density g. What will be its pressure when the temperature is t_1°, and density g'?

7. Prove the following formula for the focal length of a lens—

$$\frac{1}{f} = (\mu - 1) \left(\frac{1}{r} - \frac{1}{r'} \right).$$

8. What is the condition that two lenses should achromatise?

NATURAL PHILOSOPHY.—SENIOR SCHOLARSHIP.

1. When a system of forces acting on a rigid body is reduced to a single force and a couple, prove that the moment of the couple will be least when its axis is parallel to the direction of the force.

2. A uniform heavy string of length 4 l, passes through two smooth rings resting on a fixed horizontal bar ; prove that if, one of the rings being kept stationary, the other be held at any other point of the bar, the locus of the position of equilibrium of that end of the string which is farther from the stationary ring, may be represented by the equation

$$x = 3(ly)^{\frac{2}{3}} \log \frac{x}{y}.$$

3. Find the centre of gravity of the portion of a parabola intercepted between the curve, the axis, and a perpendicular to the axis.

4. Prove that a particle at the vertex of a uniform cone, attracting according to the law of nature, is equally attracted by any two parallel slices of the cone of equal thickness.

5. A heavy particle is projected vertically upwards in air, with a

velocity w, and returns to the point of projection with a velocity v; show that if the resistance of the air vary as the square of the velocity $\frac{1}{w^2} - \frac{1}{v^2}$ is constant.

6. A point moves in an orbit under the action of a force directed to a fixed centre. Prove the following expression for the force—

$$F = r \frac{d\theta^2}{dt^2} - \frac{d^2r}{dt^2}$$

7. In a lens find the diameter of the last circle of chromatic aberration.

8. Find how much the time of rising of the sun is advanced by refraction.

9. A cylindrical vessel, the weight and thickness of which are inconsiderable, is placed with its base upon an inclined plane, and prevented from sliding by the roughness of the plane; find the height to which it may be filled with fluid without oversetting.

GEOMETRICAL DRAWING.—SECOND YEAR'S SCHOLARSHIP IN ENGINEERING.

1. Find the projections of a line perpendicular to a given plane and passing through a given point.

2. Construct the angle between two planes.

3. Find the traces of a plane touching a given cone and passing through a given point.

4. Given one of the projections of a point on a given cone, find the other.

5. A pyramid with a regular pentagon for base lies on one of its faces, the vertical plane through its axis making 30° with the vertical plane of projection, draw its projections.

6. Draw the section of this pyramid made by a horizontal plane between the plane on which it lies and the centre of the base.

7. Given the trace of the lowest face of a cube, the angle which its lowest face makes with that trace, and the projection and index of the lowest corner of the cube, construct its projections.

8. Construct the real section of a right circular vertical cylinder made by a plan given by its traces.

9. Make an isometric sketch of the same problem.

10. Find a measuring point and line for a line in a vertical plane making a given angle with the picture plane, and making in that plane a given angle with the horizon.

SURVEYING, LEVELLING, AND MENSURATION.—THIRD YEAR'S SCHOLARSHIP IN ENGINEERING.

1. Describe the graduation of the pentagraph.

2. Explain the principle of the planimeter.

3. Describe the adjustments of the parts of the transit theodolite carried on the horizontal axis.

4. Explain accurately the adjustment of the line of collimation of a level when two very distant level points are used.

5. Give and prove the formula for the reduction of an angle to the centre, and explain under what circumstances this formula becomes useful.

6. Describe the methods of making a contour survey.

7. Find by Simpson's rule the position of the centre of gravity of a body, bounded by a surface of revolution whose radia at intervals of 6 inches are—2 inches, 2¼, 3, 3¾, 5½, 5¼, and 3.

<div align="right">ALEXANDER JACK, Professor.</div>

ANATOMY AND PHYSIOLOGY.—SCHOLARSHIP OF THE THIRD YEAR.

1. State the characters distinguishing the duodenum, jejunum, and ilium intestines.

2. Describe the course, relations, and structure of the œsophagus.

3. State the origin, course, relations, and branches of the glosso-pharyngeal nerve.

4. Describe the spinal cord and the roots of the spinal nerves.

5. Give an outline of the function of the liver, the composition and use of the bile.

6. Give an outline of the respiratory movements, the aerial capacity of the chest, and of the changes in the composition of the respired air.

ANATOMY AND PHYSIOLOGY.—SCHOLARSHIP OF THE SECOND YEAR.

1. Describe the position, connexions, and disposition of the fibrous and serous parts of the pericardium.

2. Describe the relations and connexions of the right auricle of the heart ; next open into it and state the arrangements of its internal parts.

3. Describe the general and microscopic characters of muscular tissue.

4. Describe the structure of a vein.

5. Describe the impulse and sounds which accompany the action of the heart.

6. State the source, nature, and composition of the gastric juice, and its office in the digestive process.

ANATOMY AND PHYSIOLOGY.—SCHOLARSHIP OF THE FOURTH YEAR.

1. Describe the origin, course, and connexions of the optic nerve.

2. Describe the choroid coat of the eye, and the ciliary processes.

3. Describe the nasal cavities, the passages communicating with them, the arrangement of the mucous membrane and the distribution of nerves upon it.

4. Describe the vocal cords and the arytenoid cartilages.

5. Describe the structure of the lymphatic glands and the phenomena of lymphatic and lacteal absorption.

6. State the functions discharged by the medulla oblongata.

PRACTICAL ANATOMY.—SCHOLARSHIP OF THE FOURTH YEAR.

1. Describe the coverings of the testis, the intimate structure of the organ and of the epididymis.

2. Describe the relations and structure of the vesiculæ seminales and vasa deferentia.

3. Describe the origin, course, relations, and curvatures of the internal carotid artery.

4. Describe minutely the inguinal channel.

5. Describe the internal epigastric artery.

PRACTICAL ANATOMY.—SCHOLARSHIP OF THE THIRD YEAR.

1. Describe the relations of the urinary bladder in male subject, its ligaments and structure.

2. Describe the ischio-rectal space, and the accelerator urinæ muscle.

3. Describe the origin, course, relations, and branches of the internal pudic artery.

4. Describe the relations of the thyroid body and its vessels.

5. Describe the origin, course, relations, and branches of the radial artery.

J. H. CORBETT, *Professor.*

PATHOLOGY.—FOURTH YEAR'S SCHOLARSHIP.

1. What are the appearances of the kidney in Bright's disease, the condition of the urine, and the tests for its discovery?

2. What are the effects of complete paraplegia on the motor and excito-motor nerves of the lower extremities, its effects on nutrition of these parts, and on the condition of the urine?

3. What are the causes of paraplegia?

4. What are the different forms of epilepsy, and the causes of each?

5. Is diabetes, its tests, and the several causes assigned for its production?

6. What are the various forms and causes of lung condensation?

7. What are the external manifestations of typhoid fever, and the pathological changes taking place internally?

8. What are the causes of œdema, general and partial?

9. What are the causes of hæmoptysis?

10. What organs are principally endangered in intermittent fever, and what is the cause?

11. Explain the mode of production of cirrhosis of the liver.

12. What is the reason that persons in tropical climates are more prone to acute hepatitis than those living in temperate climates?

13. What are the causes of atrophy of the liver; what effect has age on this organ?

DENIS CHARLES O'CONNOR, *Professor.*

SURGERY.—SCHOLARSHIP EXAMINATION.

1. Describe the process of inflammation, comprising all those changes which have their seat in the blood-vessels and in the alterations of tissue.

2. What proofs are given in support of the amœboid movements of leucocytes during the inflammatory process?

3. Describe pyæmia or systemic infection as a primary and as a secondary affection.

4. Describe the pathology and treatment of scrofulous synovitis.

5. Describe the different forms of contusions of the brain, their symptoms and treatment, and also of those severe injuries of the head, accompanied with watery discharges, and from whence they issue.

6. How do foreign bodies enter the air passages, under what circumstances, their diverse kinds, their situation and mobility, their symptoms, diagnosis, and treatment?

7. Detail the operations included under the term bronchotomy, the several instruments used in those operations, and the cases suited for each.

8. What are the causes and symptoms of ruptured urethra, the treatment, and consequences?

9. Describe the operations practised for the radical cure of reducible inguinal hernia by Wutzer and by Wood, and of irreducible by the taxis.

10. Describe the appearances and treatment of extroversion of the bladder.

11. What are the several diseases of the prostate gland, their symptoms, consequences, and treatment?

12. Describe the osteoplastic resection of the upper jaw, and the cases suited for this operation.

WM. K. TANNER, *Professor.*

MIDWIFERY.—FOURTH YEAR'S MEDICAL SCHOLARSHIP.

1. What is the vesicula umbilicalis? How is it situated in the earliest stage of pregnancy; and how towards its termination? To what structure in oviparous animals is it analogous?

2. Is the occurrence of menstruation necessary for a woman to become pregnant? Give the reasons for your view of the question.

3. In what stage of labour is there most danger to the life of the child? Wherein does the danger consist, and what practical suggestions are to be deduced from its existence?

4. In a labour which has, up to this time, proceeded favourably, the head has ceased to advance. On examination, the anterior fontanelle is felt very plainly; and is lower down than usual. There appears to be sufficient room between the child's head and the pubis. What is the nature of the arrest; and how would you proceed to remedy it?

5. Give the symptoms, mechanism, and management of a face presentation.

6. How does "spontaneous evolution of the fœtus," as described by Denman, differ from the "spontaneous expulsion" of Douglas? Describe the process in each of these forms of labour.

J. (R.) HARVEY, A.B., M.D., *Professor.*

THERAPEUTICS.—SENIOR SCHOLARSHIPS.

1°. Therapeutical applications of OPIUM; difference in action of its preparations, and different salts of its alkaloids.

2°. Therapeutical applications and modes of administering CHLOROFORM; contra-indications to its use.

3°. Uses and modes of administering BROMIDE OF POTASSIUM.

4°. Through what channels are medicinal agents introduced into the economy?

5°. What agents act specially on the nerves? What on the blood? What on the cells?

6°. Action of *Diuretics*; applications and different classes, with precautions in using them.

7°. What circumstances modify the action of salines?

8°. What chief substances act as *Expectorants*, and how do they differ in action?

9°. What circumstances will determine your choice of CATHARTICS?

MATERIA MEDICA.—SCHOLARSHIPS OF THIRD YEAR.

1°. MONKSHOOD.—Natural history; constituents; active principle; physiological action; therapeutical applications; preparations; doses; administration.

2°. ALOES.—Plant furnishing; constituents; action; uses; preparations; doses; and administration.

3°. COLOMBO.—Whence derived; active principle; action; uses; preparations; and administration.

4°. DIGITALIS.—Constituents; active principle; action; uses; doses; administration.

5°. ERGOT.—Active principle; action; uses; doses; administration.

6°. TESTS—of morphia; quinia; strychnia.

7°. BISMUTH.—Preparations; adulterations; tests of purity; action; uses; administration.

8°. IODIDE OF POTASSIUM.—Tests; adulterations and modes of detecting; action; uses; and administration.

9°. SULPHURIC ACID.—Tests of purity; action; uses; and administration.

PURCELL O'LEARY, *Professor.*

APPENDIX E.

TABLE giving the LIST of CLASSES, NUMBER of LECTURES, and of STUDENTS attending same, for the Session 1871–72.

Classes.	No. of Lectures a Week.	No. of Students.	No. of Lectures attending.
Greek,	10	24	250
Latin,	9	26	213
English Language,	3	14	35
„ Literature,	3	7	60
History,	3	3	60
French,	3	79	235
Mathematics,	14	39	243
Chemistry,	3	52	70
Practical Chemistry,	7	48	42
Natural History,	3	59	69
Natural Philosophy,	13	79	151
Metaphysics,	3	1	35
Logic,	3	9	35
Geology and Mineralogy,	5	15	74
Engineering,	12	22	290
Anatomy and Physiology,	5	96	108
Practical Anatomy,	5	22	103
Surgery,	3	45	56
Midwifery,	3	37	56
Materia Medica,	3	43	53
Medicine,	3	41	60
Medical Jurisprudence,	4	34	36
English Law,	9	12	72
Civil Law,	3	9	44

APPENDIX F.

FORM of CIRCULAR from PRESIDENT, and SPECIAL REPORTS from PROFESSORS.

RETURN to be filled up by the Professor of _____, and to be returned to the Registrar, so filled up, for the official information of the President, on or before the 30th instant, being for the Collegiate Session, 1871–72.

A.—As to the Course or Courses of lectures given by the Professor. 1st. Duration and extent of the Course; number of Terms. 2nd. Number of weeks of Lectures in each Term. 3rd. Number of Lectures weekly, and days and hours of Lectures.

Appendix F.

Form of
Circular
from Presi-
dent, and
special
Request of
the Pro-
fessors.

B.—The description or title of the Course or Courses of Lectures delivered, and a general abstract of the subjects of instruction contained in the Course, and the title of the Text-books recommended.

C.—Whether the Lectures are illustrated by reference to maps, diagrams, specimens, or experiments; and a general notice of the kind of illustrations used.

D.—Whether any method of Tutorial, or other special instruction, is employed, as by setting out portions of Text-books for lessons, by themes, or exercises in composition, or problems; and whether Special Class Examinations are held, and at what time; or whether Herborisation Excursions, or Field Exercises, are given.

E.—What faculties or division of Students are those attending Courses of Lectures of the Professors making the return.

F.—The number of students attending each Course—distinguishing Matriculated and Non-matriculated Students; and the general regularity of attendance.

G.—The general conduct of Students at the Professor's Lectures; and the general state of discipline as regards the Professor's Classes.

H.—The particular condition of the department of which the Professor has charge, as to supplies, fitments, cleanliness, and accommodation, for the purposes of instruction.

The Professor, in making the above returns, is requested to mark the answers with the letter designating the portion of the form of return, as above, to which each answer refers.

Signed, by order of the President,

R. J. KENNY, *Registrar*.

Report of Professor of Greek for Session 1870-1.

A.—1. The course extended over three terms. 2. The first term consisted of eight weeks and two days; the second term of eleven weeks and four days; the third term of five weeks. 3. There were five days of lecture in each week, viz—two on every day except Saturday, between the hours of 9 and 11 o'clock, A.M.

B.—The Greek Language—Portions of Xenophon, Euripides, Homer, Thucydides, Demosthenes, Herodotus, and Æschylus were read in class.

C. There are maps and casts from the antique, for reference, on the walls of the lecture-room.

D.—Portions of the authors were prepared in the intervals between the lectures, and exercises written.

E.—Exclusively to the Faculty of Arts.

F.—Twenty-six—all matriculated.

G.—The conduct and discipline in the class were very good.

H.—Satisfactory.

JOHN RYALL.

Report of the Professor of Latin for the Session 1870-71.

A.—1. The course extended through three terms. 2. First term eight weeks; second term eleven weeks; third term four weeks. 3. Junior class, four lectures weekly; senior class, three lectures weekly; third year's class, two lectures weekly.

B.—The Latin language.—Junior class : Livy, part of Book XXIII. *Appendix F.* Virgil, Eclogues, VII.–X. Senior class : Horace, Epistles, Book II. ; *Reports* Cicero, De Officiis, part of Book II. Third year's class : Martial, I., *of the Professors.* 1–58 ; Tacitus, Histories, III., 1–31.

C.—The lectures were illustrated by references to the Art collections belonging to the college.

D.—The students prepared a portion of the text-book for each lecture. They also wrote Latin exercises in prose and verse.

E.—Students in Arts.

F.—Twenty-seven—all matriculated.

G.—Satisfactory.

H.—Satisfactory.

B. Lewis.

RETURN OF THE PROFESSOR OF MATHEMATICS FOR THE SESSION 70–71.

A.—The ordinary Mathematical courses consisted of lectures to students of the first, second, and third years. In each case the lectures extended over the three terms ; and the days of lecture in each case were Monday, Wednesday, and Friday. The hours of lecture and the number of weeks in each term are given by the table.

	Number of Weeks in each Term.			
	First Term.	Second Term.	Third Term.	Hours of Lectures.
First Year,	7	13	5	12 to 1
Second "	7	13	5	2 to 3
Third "	7	12	5	3 to 4

Besides these there were additional voluntary courses of lectures to students of the first and second years. These were delivered on Tuesday and Thursdays, viz. for first year's students, from 12 to 1, and for second year's students, from 2 to 3. For the former, the first term contained 16 weeks of lecture, and the second 8 weeks. For the latter there were 4 weeks of lecture in the first term. These optional courses concerned the higher developments of the subjects of the ordinary lectures of the year.

B.—The subjects of lecture are—in the first year, Arithmetic, Geometry, Algebra, Trigonometry. In the second year—Trigonometry, Geometry of two Dimensions, Theory of Equations, Differential Calculus, Integral Calculus. In the third year—Geometry of three Dimensions, Differential Equations. The lectures are to a considerable extent independent of text, except those on Geometry, which are based on Euclid ; but the students are recommended to use, in the same time, for each subject, one of the books in the following list :—Todhunter's Edition of Euclid, Algebra, Algebra for Beginners, Trigonometry, Trigonometry for Beginners, Spherical Trigonometry, Theory of Equations, Conic Sections, Differential Calculus, Integral Calculus, Examples on Geometry of three Dimensions. Bernard Smith's Arithmetic ; Potts' Edition of Euclid ; Wood's Algebra ; Colenso's Algebra ; Snowball's Trigonometry ; Salmon's Conic Sections ; Salmon's Geometry of three Dimensions ; Leroy's Geometry of three Dimensions ; Boole's Differential Equations.

C.—No special illustrations were used.

D.—Problems are set regularly in each class, and occasionally passages from the text-books are to be prepared. *Viva voce* class examinations are held, and also written examinations at natural divisions of the subjects in the course.

E. The students attending the lectures were students in Arts and Engineering.

E.—Of these there were, attending the lectures of :—

	Mat.	Non-Mat.
First year,	26	0
Second year,	13	0
Third year,	1	0

The general regularity of attendance was very fair.

G.—The general conduct of the students at lectures was very good.

H. The general condition of the department was satisfactory.

C. NIVEN,
Professor of Mathematics.

6th March, 1872.

REPORT OF THE PROFESSOR OF NATURAL PHILOSOPHY.

A.—Five courses. 1. Each, 3 terms. 2. In the first term lectures were delivered during 8 weeks ; in the second, during 12 weeks, and in the third, during 5 weeks. 3. In the senior class of Experimental Physics and Mathematical Physics, 3 lectures were delivered in each week ; in each of the other classes, 2 lectures in each week.

B.—In the classes of Experimental Physics the subjects were—The Elements of Mechanics and Hydrostatics, Heat, Light, Electricity, and Acoustics. In Mathematical Physics—Mechanics, Hydrostatics, Optics, and Astronomy. In Engineering Physics—Practical Mechanics and Theory of the Steam Engine. Text-books—Jamin, "Cours de Physique," Ganot, "Traité de Physique," Balfour Stewart, "Treatise on Heat," Todhunter's "Statics," Tait and Steel's "Dynamics," Brinkley's "Astronomy," Parkinson's "Optics," Twisden's "Practical Mechanics," De Pambour's "Theory of the Steam Engine."

C.—The lectures were illustrated by experiments and diagrams.

D.—In Mathematical and Engineering Physics the tutorial method was used and problems given as exercises.

E.—The Honor course in Experimental Physics was attended by students of third year in Arts ; the senior class in Experimental Physics, by students of the second year in Arts, and the second year in Engineering. Mathematical Physics by students of third year in Arts, and third year in Engineering. Engineering Physics by students of third year in Engineering, and junior Experimental Physics by students of first year in Medicine.

F.—Honor Physics, 3 ; senior Experimental Physics, 19 ; Mathematical Physics, 5 ; Engineering Physics, 2 ; junior Experimental Physics, 54. Attendance regular.

G.—The conduct of the students was most satisfactory.

H.—The arrangement for carrying on the business of the department were satisfactory.

JOHN ENGLAND.

REPORT OF THE PROFESSOR OF LOGIC AND METAPHYSICS.

A.—On Logic and Metaphysics.—1. Logic, one term ; Metaphysics, two terms. 2. First term, eight weeks ; second term, twelve. 3. Logic, Tuesdays, Thursdays and Saturdays, at 11 o'clock. Metaphysics, Tuesdays and Thursdays, at 1 o'clock ; Saturdays, at 10 o'clock.

B.—Logic, Deductive and Inductive—Aldrich, parts of Mill, Baynes, Thompson, and Bain. Metaphysics : History of Philosophy and Psychology ; History of Philosophy of the University of France.

C.—No illustrations are used except such as are drawn or written on the board during the course of the lectures.

D.—Both the tutorial and professorial systems are used.

E.—Logic, second year's students in Arts; Metaphysics, third year's students in Arts.

F.—Logic, 11; Metaphysics, 1. All matriculated; attendance very satisfactory.

G.—Conduct of students in the class-rooms unexceptionable.

H.—Satisfactory.

G. S. READ.

REPORT OF THE PROFESSOR OF GEOLOGY AND MINERALOGY FOR THE SESSION 1870-71.

A.—The lectures of the Professor of Geology and Mineralogy extended over the three terms of the college session—the first term including 9 weeks' lectures; the second 12 weeks; and the third 8 weeks. The number of lectures in each week was three, the days being Tuesdays, Thursdays, and Saturdays, and the total number delivered in the course was 74.

B.—In the course, which embraced Physical Geography, Geology, Palæontology, and Mineralogy, the following Text-books were recommended—Hughes' Outlines of Physical Geography, Somerville's Physical Geography, Herschell's Physical Geography, Lyell's Elements and Principles of Geology, Lyell's Student's Manual of Geology, Juke's Manual of Geology, Murchison's Siluria, Owen's Palæontology, and Nicol's Manual of Mineralogy.

C.—Maps, sections, diagrams, and specimens were used in illustration of the lectures.

D.—The form of instruction was professorial; and field exercises in Practical Geology were given towards the end of the session.

E.—The lectures were attended by Arts and Engineering students.

F.—The number of students attending the course was 19, 4 of which were Art students, and the remaining 11 belonged to the department of Engineering.

G.—The conduct of the students during lecture was highly satisfactory to the professor.

H.—As regards fitments and other requirements, and also as relates to cleanliness and accommodation, these are all such as the professor could wish.

ROBERT HARKNESS.

28th March, 1872.

RETURN OF THE PROFESSOR OF MODERN LANGUAGES for the official information of the President for the Collegiate Session, 1870-71.

A.—1. Three terms during the session. 2. Nine weeks in the first term, fourteen in the second, and five in the third. 3. Three lectures weekly in each class : Mondays, Wednesdays, Fridays.

B.—There were three classes of French Language and Literature :—First Class of Medical French, Second Class of Senior French, Third Class of Junior French. The first class read extracts from the writings of Bichat, Pariset, Lallemand, Chomel, and Milne Edwards, with lectures on the syntax and composition, on the Mondays. The second class read the *Littérature Classique* and *Histoire de la Littérature Francaise*, by Demogeot, with lectures on the syntax and comparative grammar, on the Mondays. The third class read the easiest portions of the same works,

with exercises written weekly, corrected and commented upon on the Mondays.

C.—The lectures are not illustrated by any maps or diagrams.

D.—In this course of instruction the tutorial method is blended with the professorial, exercises being given, as well as portions of the text-book to prepare, along with lectures on literature and comparative grammar.

E.—The students attending the classes of French belong to the Faculties of Medicine and Arts, and to the Engineering school.

F.—The number of students in the Medical French class was 51; number of students attending the Senior French 19; number of students attending the Junior French, 9. Total number 79.

G.—The general conduct of the students was excellent.

H.—The general condition of the department required was very satisfactory.

R. DE VERICOUR.

28th February, 1872.

JURISPRUDENCE AND POLITICAL ECONOMY, 1870–71.

A.—1. Political Economy.—This is the second session in which there have been no students in Political Economy. 2. Jurisprudence—34 lectures, 2 terms. 3. Civil Law—24 lectures, 2 terms.

B.—Jurisprudence—Selections from Maine, Mill, Stephens, Austin, and other writers. Civil Law—Sandar's Justinian.

C.—No.

D.—The tutorial and professorial methods are both employed.

E.—In Jurisprudence and Civil Law, law students.

F.—In Jurisprudence six students. In Civil Law three students.

G.—Very good.

R. H. MILLS.

2nd March, 1872.

MEDICAL JURISPRUDENCE, 1870–71.

A.—The Professor of Chemistry having concluded his portion of the course, the (12) lectures by the Professor of English Law were commenced on the 21st of February, and concluded on the 10th March, 1871. Four lectures were delivered in each week.

B.—The order of subjects followed was that in Professor Traill's Outlines of Lectures on Medical Jurisprudence. The law with respect to each was explained, and the works of Taylor, Beck, Paris and Fonblanque, Cooper, &c., referred to, with, as to Criminal Lunacy, Winslow, Mayo, and Bucknill. In relation to the subject of Medical Police, the Irish Sanitary Acts were explained, as also was the law relating to Coroner's Inquests.

C.—The illustrations used were relations of cases in which matter appropriate to the subject under consideration could be pointed out, and their applicability explained. These were cited from the works on Forensic Medicine, already mentioned, from Russell on Crimes, Woolrych's Criminal Law, Howell's State Trials, and other authorities.

D.—Explanations sought for are fully given, and sources of information pointed out. The variety of subjects treated of do not admit of time for more special instruction.

E.—Medicine (I presume).

F.—I have no means of distinguishing the matriculated from non-matriculated, the Bursar's tickets having been given to Professor Blyth, whose list is given by the Registrar to me.

G.—The conduct of the students was very good indeed ; their *Appendix F.* demeanour manifested attention to and interest in the subjects treated of. To prevent any student being able to make up for irregularity of *Reports of the attendance upon either Professor's lectures, by a closer attendance Professors.* upon the other, I have suggested, for the consideration of the Council, that attendance upon a certain proportion of each course should be insisted upon ; this suggestion the Council have approved of.

H.—The necessary accommodation is afforded.

MARK S. O'SHAUGHNESSY,
Professor of English Law.

March 18th, 1872.

ENGLISH LAW, 1870–71.—PROFESSOR'S REPORT TO THE PRESIDENT.

A.—The lectures were commenced in the term on the 3rd of December, 1870, and continued until the 22nd of the same month. In the following term the lectures were resumed on the 21st February, and were concluded on the 16th March, 1871. The course delivered to each of the three classes comprised twenty-four lectures, of which not more than four were given in any week, the days and hours being selected so as to meet the convenience of the students, their engagements with other professors, and otherwise.

B.—The lectures to the first year's class are on the Law of Real Property ; the order of the subjects treated of being that of the text-book (Williams). The readings are illustrated by references to leading cases, to the Real Property Statutes, the principal text-books, and to works on conveyancing ; and the progress of the students is tested by frequent examination on the matter of the lecture.

The Law of Personal Property chiefly occupied the attention of the second year's class ; the remedies by action, and the practice according to the Common Law Procedure Acts, being explained. The text-books used were Williams (*Personal Property*) and Smith (*Contracts*). Reference was made to Smith's Leading Cases, Smith's Mercantile Law, Abbott on Ships, &c., &c.

To the same class a course of lectures on the principles of Equity was delivered ; the text-book used was Smith's Manual.

The subjects treated of to the students of the third year were, as to Equity, the origin of the jurisdiction of the Court of Chancery, the subjects of its jurisdiction, and the new practice in Ireland under the Act of 1870 ; as to Common Law, the principles of pleading and the classification of actions, with the equitable jurisdiction of the Courts of the Common Law ; as to Crown Law, the Courts of Criminal Jurisdiction, and the modes of procedure in them.

C and D.—In all the classes frequent references are made to illustrative cases, particular passages of approved writers are read, and their connexion with the subject explained, and the intelligence of the students is exercised by questions upon the matters treated of.

E.—The Faculty of Law.

F.—13 students attended, of whom 4 were non-matriculated. With the exception of one student, who went to reside in Dublin in the middle of the period over which the course extended, the attendance was regular and satisfactory.

G.—The conduct of the students was perfectly satisfactory ; their demeanour and diligence shewed a most commendable desire to merit approval.

G

H.—It would be an improvement if arrangements could be made in the Library for a larger number of law books, so as to facilitate the accommodation of students with suitable legal reading, and also for a better classification of the works in the Library and Examination Hall. This would help the Professor in his advice as to studies and in enlarging the student's knowledge of books—a necessary part of a lawyer's education.

<div align="right">

Mark S. O'Shaughnessy,
Professor of English Law.

</div>

March 13th, 1872.

Report of the Professor of Natural History.

A.—One course on Zoölogy and Botany.   1. The course consisted of 69 lectures and extended over 3 terms.   2. The first term included 8; the second, 12; and the third, 5 weeks of lectures.   3. Three lectures weekly, at 3, P.M., on Monday, Wednesday, and Friday.

B.—The course included lectures on the principles of Zoölogy and Botany, with special reference to the Structure and Classification of Plants and Animals.   The text-books used were, Huxley's "Introduction to the Classification of Animals," and Henfrey's "Elementary Course of Botany" (second edition, by Dr. Masters).   Rolleston's "Forms of Animal Life," Hooker's "Student's Flora of the British Islands," and (to junior students) Oliver's "Lessons in Elementary Botany" were also recommended.

C.—The lectures were illustrated by means of specimens and diagrams. Herborizations were given during the third term.

D.—The professorial method of instruction was chiefly employed.

E.—The lectures were attended by students of the third year in Arts, and of the first year in Medicine.

F.—Five students in Arts, 42 in Medicine, and 12 non-matriculated students were present during the course.   Of these 8 attended *diligently*, 46 duly, while 5 were disqualified for insufficient attendance.

G.—Excellent.

H.—The lecture-room is now well ventilated, and heated by means of hot-water pipes.   It still remains badly lighted.   A set of drawers, suitable for keeping the zoölogical and botanical diagrams, has been supplied.   As during previous sessions, the Professor of Natural History is much in want of a private room, wherein to prepare himself to meet his class, afford instructions to the more advanced students, and perform various offices in connection with the care of the collections intrusted to his charge.   The room in the Tower, connecting the Museum with the Lecture-room, would admirably serve for these purposes, but although this room is not required for the use of any other Professor, it has not yet been assigned to the Professor of Natural History.

<div align="right">

J. Reay Greene.

</div>

Return of Professor of Civil Engineering.

A.—1. Each course of lectures extends through three terms.   2. In the first term, 9 weeks; in the second term, 12 weeks; in the third term, 6 weeks.   3. Three lectures per week in each course.   Students of first year, Monday, Wednesday, and Friday, 10, A.M.; second, Tuesday, and Saturday, 10, A.M.; third, Monday, Wednesday, and Friday, 12 noon.   Office open Tuesday, Thursday, Saturday, 10, A.M. to 2, P.M.

Total number of lectures—

Students of first year,	.	.	.	.	71
,, second year,	.	.	.	.	72
,, third year,	.	.	.	.	72
Office,	.	.	.	.	.	—
			Total,	.	280

B.—*First year.*—Descriptive Geometry; Orthographic Projection; Shadows; Isometric Projection; Perspective; Principles of Architecture; Geometry of the Oblique Bridge. Text-books—Hall's Descriptive Geometry; Engineer and Machinist's Drawing Book; Rickman's Architecture; Buck on the Oblique Bridge. *Second year.*—Surveying, Levelling, and Mensuration. Text-books—Rankine's Civil Engineering; Cotton's Manual of Railway Engineering; Williams' Geology. *Third year.*—Materials used in Construction; Principles of Construction of Bridges, Roads, Railways, Canals; Hydraulic Engineering; Strength of Materials; Principles of Construction of the chief machines employed by Civil Engineers. *Drawing Office.*—First year students are chiefly employed in drawing the problems given at lectures, and a few easy examples of their application. The second and third year's classes in making working drawings of examples of the subjects of lectures, and in mapping.

C.—Illustrated by reference to maps, drawings, and instruments.

D.—The tutorial and professorial methods of instruction are adopted, according to the subject of the lecture. Instruction is given in the field.

E.—Students in the department of Civil Engineering.

F.—Students of first year, . . . Mat. 10 . . . Non. Mat. 0

F.—Students of first year,	.	.	Mat.	10	Non. Mat.	0
,, second year,	.	.	.	9	.	0
,, third year,	.	.	.	2	.	0
,, attending office only	.	.	1	.	0
		Total,	.	22		

The majority of the students have attended tolerably regularly.

G.—Conduct of students generally good.

H.—General condition of department good.

<div style="text-align:right">ALEXANDER JACK,
Professor of Civil Engineering.</div>

March 21st, 1872.

RETURN BY THE PROFESSOR OF THE PRACTICE OF MEDICINE, FOR THE
YEAR 1871–72, AS REQUESTED BY THE PRESIDENT.

A.—Practice of Medicine: 1st, from November 1st, 1871, to April 30th, 1872—in three terms; 2nd, interrupted by vacation at Christmas and Easter; 3rd, the lectures on Mondays, Wednesdays, and Fridays.

B.—Subject:—The Theory and Practice of Medicine. Text-books: Watson's Practice of Medicine and Aitken's Practice of Medicine.

C.—Illustrated by diagrams and specimens.

D.—The class are occasionally examined in the subjects of lectures previously delivered.

E.—Students of the Medical Faculty.

F.—38 Matriculated students, 3 non-matriculated (41 total).

G.—The conduct of students excellent.

H.—Proper access to the private room of the Professor is much required, and has been applied for.

<div style="text-align:right">DENIS CHARLES O'CONNOR, M.D.,
Professor of the Practice of Medicine.</div>

February 23rd, 1872.

Appendix. RETURN FROM THE PROFESSOR OF SURGERY, FOR THE OFFICIAL INFORMA-
Reports   TION OF THE PRESIDENT.
of the
Professors.   A.—Surgery—Three terms—from 17th of October, 1871, to 23rd of
December. 2. From 8th of January, 1872, to 23rd of March, and
from 8th of April to 1st of May. 3. Three lectures weekly, Tuesday,
and Thursday, from 3 to 4 o'clock, P.M., on Saturday, from 1 to 2.

B.—Theory and Practice of Surgery and Operative Surgery.
Erichsen's Surgery, Miller, Gant, Fergussen.

C.—The dead body, states, diagrams, and specimens.

D.—Occasional class examinations.

E.—Faculty of Medicine.

F.—General attendance good; 40 matriculated, 1 non-matriculated.

G.—General conduct and discipline very good.

H.—Accommodation for the purpose of instruction good; general con-
dition of the department in all other respects bad and inefficient.

W. P. TANNER.

Cork, March 9th, 1872.

REPORT OF PROFESSOR OF MATERIA MEDICA.

A.—One six months' course. Three lectures weekly, on Tuesdays,
Thursdays, and Saturdays, from 2 to 3, P.M.

B.—Lectures on Materia and Therapeutics, comprising general Phar-
macology, Pharmacognosy, Pharmaco-dynamics, Posology and Formula-
tion, with the essentials of Hygiene, Climatology, and Balneology.

C.—Illustrated by diagrams, drawings, and specimens.

D.—Demonstrations of articles of the Materia Medica.

E.—Faculty of Medicine.

F.—36 students, all matriculated. Attendance most regular.

G.—Conduct most satisfactory in general, with one or two exceptions
for the first time this year. Professor's remonstrances, however, on this
head have reduced everything to proper order.

H.—Since the fire by which the Professory, Laboratory, and Museum
were destroyed, there has not been a sufficient supply of materials or
chemicals, and the Professor has no assistant or even Laboratory porter.

MIDWIFERY.

A.—About sixty lectures—Six months' course ; three lectures
weekly, Monday, Wednesday, and Friday, 4 o'clock.

B.—Midwifery. Physiology of the functions of reproduction and ges-
tation. Parturition in its various bearings, theoretical and practical.
Diseases of childbed and of infants.

C.—Diagrams, casts, models, preparations, &c.

D.—Medical.

F.—Matriculated, 33 ; non-matriculated, 4 ; total 37. General attend-
ance good.

G.—Good.

H.—Museum department deficient. Fitments have been complained
of in vain by all the Medical Professors for several years past. No
means of getting to Professor's room except through Lecture-room :
Professor and class thus constantly disturbed. A plan for a passage
rejected by the Board of Works, but nothing substituted.

This return, though stated to be for 1871–2, is I presume intended to
be for 1870–1. I am not in a position to report on 1871–2 as yet.

J. (R.) HARVEY, A.B., M.D.

APPENDIX G.

List of UNIVERSITY DEGREES, DIPLOMAS, and HONORS obtained by STUDENTS of QUEEN'S COLLEGE, CORK, at the COMMENCEMENTS in JUNE and OCTOBER, 1871.

STUDENTS who have obtained DEGREES, DIPLOMAS, and HONORS, 1871.

M.D.

James Magill, B.A., Second Class.

Passed.

Thomas Bennett.
Robert A. Bernall.
James Dawson.
Benjamin Derham.
Thomas Derham.
Leslie Jones.

John P. M'Carthy.
Patrick C. O'Brien.
Richard Ryan.
Francis J. Tuohy.
George Vickery.
Joseph Wilson.

M.A.

Ringrose Atkins, . Second Class in Experimental Science.
Philip L. Benson, . Second Class in Natural Science.
Thomas Horan, . Third Class in Mathematical Science.

M.CH.

Thomas Bennett.
Robert Bernal.
Benjamin Derham.
Thomas Derham.
Leslie Jones, C.E.
James Magill, B.A.

Patrick C. O'Brien.
Richard Ryan.
Francis J. Tuohy.
George Vickery.
Alexander Young.

B.A.

William D. Blyth, First Class in Experimental Science.
Ludlow T. Colthurst, Second Class in Natural Science.
Charles J. M'Curtie, Second Class in Mathematical Science.
William C. Taylor, Second Class in Ancient Classics.

Passed.

Robert E. Burgess.
Charles A. Harvey.

John Holdbrook.
Percy H. Johnston.

B.E.

Henry Haycroft, Second Class.
Robert J. Hill, Third Class.
Marcelino Chatrell, Third Class.
James Haycroft, Third Class.

Passed.

Philip Barry.
Leslie Jones.
George B. Laffan.

FIRST UNIVERSITY EXAMINATION IN ARTS.

James J. Hynes, First Class.
James J. O'Donoghue, First Class.
Christopher L. Garde, Second Class.
William J. Williams, Second Class.
John F. Ahearne, Third Class.

Passed.

Michael Ronan.
Charles K. Tanner.

FIRST UNIVERSITY EXAMINATION IN MEDICINE.

Bartholomew O'Brien, Second Class.

Passed.

Ringrose Atkins.
Robert T. Beamish.
Philip L. Benson.
William E. Breton.
Robert E. Burgess.
Francis J. Butler.
John H. Cogan.
John G. Collis.
John L. Corbett.
Henry Cosby, B.A.
Francis E. Davis.
Gerald Fitzgerald.
Henry A. Fogarty.
Thomas J. Galvey.
Charles A. Harvey.

Michael Lawton.
Richard Leader.
John R. Leech.
Samuel F. Lucy.
Patrick J. Macnamara.
Michael J. Malone.
Thomas Nevill.
Patrick O'Connell.
Joseph O'Sullivan.
William Pearson.
James Ring.
Carew C. H. Smyth.
Robert Tedbury.
Thomas H. Whitton.

FIRST UNIVERSITY EXAMINATION IN ENGINEERING.

Marcellus Chatrell, Third Class.
James Haycroft,   ,,

Passed.

Luke Franklin.

PRIZES IN COMPOSITION OPEN TO COMPETITION OF GRADUATES AND UNDER-GRADUATES.

Daniel Wilson, First Prize, for Essay signed "Giordano Bruno."

EXHIBITIONS AWARDED AT FIRST UNIVERSITY EXAMINATION IN ARTS.

James J. Hynes, First, £50 a-year for three years, and £10 a-year for three years, as best answerer in Ancient Classics.
James J. O'Donoghue, Second, £15 a-year for three years.

GEOMETRICAL PRIZE AT ENTRANCE, 1871–2.

William Stoops, First.
James Bingham, Second.

ENGLISH COMPOSITION.

William O'Brien, First.
Denis F. Hanagan.

APPENDIX H.

SPECIAL REPORT from the LIBRARIAN, for the year ending March 31st, 1872.

The number of volumes in the Library at the date of this Report is 20,076. They may be classified as follows :—

Mathematics,	(Pure,	769	English Literature,	1,303
	Mixed,	667	Continental Literature,	1,584
Chemistry,		958	Celtic Literature,	53
Geology, &c.,		673	History, Antiquities, &c.,	2,708
Botany and Zoology,		1,684	Biography,	353
Medical Sciences,		3,374	Geography, Voyages, Travels, &c.,	607
Theology & Ecclesiastical History,		330	Engineering,	518
Logic and Metaphysics,		437	Agriculture,	164
Jurisprudence and Political Economy,		561	Fine Arts,	195
Education,		196	Bibliography,	99
Law,		966	Encyclopædias, &c.,	206
Ancient Classical Literature,		1,646	**Total,**	**20,076**

One hundred and thirteen volumes were presented to the Library during the year, the principal donors being the American Government and the Trustees of the British Museum.

Discipline has been efficiently maintained, there having been no serious breach of the Library regulations.

No loss to any description of Library property has occurred during the year.

Cleanliness, heating, and ventilation have been properly attended to.

The College booksellers, Messrs. Hodges and Foster, continue to execute our orders with their usual promptitude and accuracy.

MATTHIAS O'KEEFFE, *Librarian.*

APPENDIX I.

COPIES of the FORMS of ANNUAL ACCOUNTS, showing the FINAN-CIAL POSITION of the COLLEGE.

GENERAL ABSTRACT of the Account of the PRESIDENT or VICE-PRESIDENT, and BURSAR, of QUEEN'S COLLEGE, CORK, from 1st April, 1871, to 31st March, 1872.

DR.	HEAD OF SERVICE (RECEIPTS).	£	s.	d.
To Balance on the 1st April, 1871,		1,167	5	9
„ Amount received from Paymaster of Civil Services—				
	On account of Endowment,	6,582	5	1
	On account of Augmentation of Professors' Salaries,	850	19	7
	On account of additional Grant,	1,000	0	0
„ Amount of Fees and Fines,		94	14	0
		£9,795	4	5

CR.	HEAD OF SERVICE (PAYMENTS).	£	s.	d.
By amount paid for Salaries,		4,976	9	8
„ „ „ Scholars and Prizes,		1,338	1	3
„ „ „ Porters and Servants,		380	12	0
„ „ „ augmentation of Professors' Salaries,		334	9	7
„ Payments on account of Additional Grant, and Fees and Fines,		1,032	16	2
„ amount repaid to President for advance made by him in Session 1870-71,		300	0	0
„ amount paid to Professors on account of Class Fees for Session 1870-71,		238	5	0
„ amount of Library Deposits repaid to Students,		117	0	0
„ Balance indebted on 31st March, 1872,		857	10	4
		£9,795	4	5

ACCOUNT of the EXPENDITURE of the ANNUAL PARLIAMENTARY GRANT of £1,000 for SUPPLIES in the Year 1871-72.

CR.		£	s.	d.
To amount received from Paymaster-General,		1,000	0	0
„ Fees and Fines,		94	14	0
„ Balance to be debited to account of next year,		7	6	3
		£1,102	0	3

				£	s.	d.
Dr.						
By Balance to Debit of Fund from preceding year,				69	4	1
„ Amounts paid for several Departments—						
„ „ Ancient and Modern Languages,				128	10	4
„ Mathematical and Physical Sciences,						
„ „ „ „ Books,	.	£52	16	0		
„ „ „ „ Apparatus, &c.,	.	62	5	2		
				115	3	2
„ Natural Science—Books,	.	73	17	0		
„ „ „ Specimens,	.	0	7	6		
				74	4	6
„ Engineering—Books,	.	7	12	10		
„ „ Drawings, &c.,	.	16	17	0		
				24	9	10
„ Metaphysical, Legal, and Mental Sciences,				43	8	5
„ Medical Science—Books,	.	75	6	6		
„ „ „ Apparatus, &c.,	.	16	18	6½		
				94	5	0½
„ General Expenditure—						
„ „ Printing, Stationery, and Advertising,	.	129	3	3		
„ „ Water Supply,	.	1	11	0		
„ „ Porters' Clothing,	.	43	14	0		
„ „ Clock,	.	10	0	0		
„ „ Incidental Expenses,	.	29	1	7½		
„ „ Postage,	.	9	19	8		
				239	9	6½
„ Heating and Lighting,				162	15	10
„ Botanic Garden and Grounds,				130	9	6
				£1,102	0	3

JOHN ENGLAND, *Bursar.*

19th April, 1872.

APPENDIX K.

REPORT OF THE VICE-PRESIDENT ON DISCIPLINE, AND REPORTS OF THE DEANS OF RESIDENCES FOR THE SEVERAL RELIGIOUS DENOMINATIONS.

RETURN OF THE VICE-PRESIDENT.

A.—The efficiency of the Medical Department of the College was impaired by unavoidable causes, viz., the death of one Professor, and the illness of another.

B.—The order and discipline were in a good state, no serious breach of the latter having occurred during the Session.

JOHN RYALL, *Vice-President.*

February 22, 1872.

2, South-terrace, Cork,
February 27th, 1872.

SIR,—In reply to yours, dated the 22nd inst., requesting me to send a report for 1870–71 of the conduct of those students in the Queen's College, Cork, under my instruction, I beg leave to say that for the last fourteen years I have been ready and willing to give instruction to the students belong to any own Communion—that I have repeatedly asked the Council to give me permission to give religious instruction inside the College—that I appealed to the Visitors from the refusal of the Council—that at the last Visitation the Visitors ruled that by law the Council was the proper authority for determining whether the Deans of Residences should be allowed to give any religious instruction in the College—that the

Council persisted in refusing to allow the Deans to give any religious in- *Appendix K.* struction in the College, and that, under these circumstances, I have no report to make of the conduct or of the attendance of the students at my religious instructions, seeing that no religious instruction of any kind was permitted by the Council to be given in the College. *Reports of Vice-Presi- dent and Deans of Residences.*

Your obedient servant,

GEORGE WEBSTER, D.D.,
Chancellor of Cork Cathedral, Rector of S. Nicolas, Dean of Residence, and Examining Chaplain to the Lord Bishop of Killaloe.

R. Kenny, esq., *Registrar.*

Sir Robert Kane.

SIR,—It gives me much pleasure to state that the moral conduct of the Presbyterian students in attendance on the Queen's College, Cork, during the session, 1870–71, was uniformly excellent—that they were attentive to their religious duties, and that they were characterized by gentlemanly and academic propriety.

WILLIAM MAGILL,
Dean of Residences.

Cork, February 22nd, 1872.

St. Luke's, Cork,
February 27, 1872.

I beg to state, as concerning the Wesleyan students of Queen's College, Cork, under my care during the session of 1870–71, that their general moral conduct—so far as it came under my observation—was good and unexceptionable.

WILLIAM GORMAN,
Wesleyan Minister.

H